Dermatology

Version 5.3

Corrected, Updated, Lighter

PLAB 1 Keys is for PLAB-1 and UKMLA-AKT (Based on the New MLA Content-Map)

With the Most Recent Recalls and the UK Guidelines

ATTENTION: This file will be updated online on our website frequently!

(example: Version 2.6 is more recent than Version 2.5, and so on)

List of Important Autoantibodies

Anti-dsDNA and Anti-smith	SLE The **initial** test for SLE: ANA
Anti-histone	Drug-induced lupus (e.g. Hydralazine)
Anti-scl70	Systemic Sclerosis
Anti-centromere	Limited sclerosis/CREST syndrome
Anti-Jo1	Polymyositis

Anti-Ro, Anti-La	Sjogren's disease
Anti-mitochondrial	Primary biliary cirrhosis
Anti-smooth muscle	Autoimmune hepatitis
pANCA	Churg Strauss (Eosinophilic Granulomatosis with Polyangiitis)
cANCA	Wegener's Granulomatosis (Granulomatosis with Polyangiitis)
Anti-tissue transglutaminase and IgA, Anti-gliadin, Anti-endomysial	Celiac Disease
ANA	RA, initial test for SLE, and many other auto-immune diseases.

Cellulitis

Inflammation of the **skin** and **subcutaneous tissues**, typically due to infection by G+ve bacteria e.g., ***Streptococcus pyogenes*** or ***Staphylcoccus aureus***.

Features of Cellulitis

- commonly occurs on the shins.
- erythema, pain, swelling.
- there may be some associated systemic upset such as fever.

Management of Cellulitis

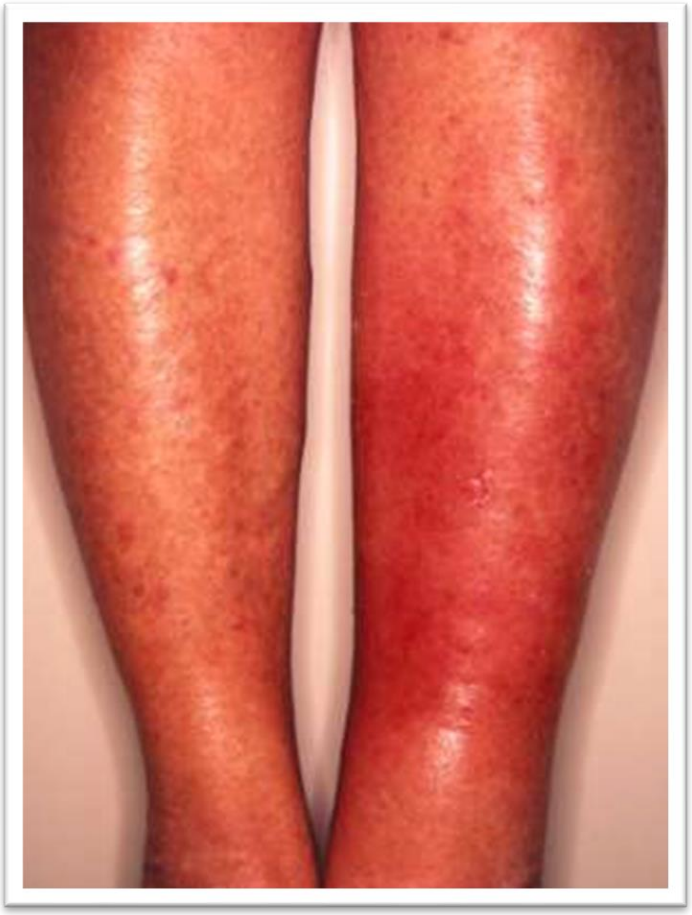
◙ First Line → **Flucloxacillin**

◙ If penicillin allergic → **Clindamycin** or **Clarithromycin**

Many local protocols now suggest the use of **oral clindamycin** in patients who have failed to respond to flucloxacillin (e.g. MRSA)

◙ If Severe cellulitis → **IV benzylpenicillin** + **flucloxacillin**.

◙ MRSA skin infection → **Vancomycin**. Imp √

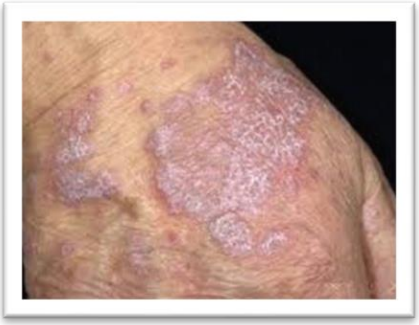
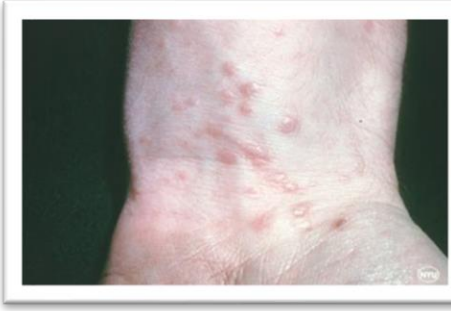


Cellulitis

Lichen Planus

4P + F and **LP**: ***P**ruritic*, ***P**urple*, ***P**apular*, ***P**olygonal* rash on the ***F**lexor* surfaces.

LP: White ***L**acy **P**attern* on the buccal mucosa


◙ Management of Lichen Planus

√ Topical steroids → the mainstay of treatment.

√ benzydamine mouthwash or spray is recommended for oral lichen planus.

√ Extensive lichen planus may require oral steroids or immunosuppression.

Benign Moles and Malignant Melanoma Questions

◙ (Question 1)

When to suspect a **malignant melanoma**?

→ (**ABCDE**) (**Important and asked previously**)

- A (**Asymmetry**) → The two halves of the mole look different in shape.
- B (**Border**) → Irregular edges.
- C (**Color**) → Different shades of black, brown, pink.
- D (**Diameter -greatest-**) → **> 6 mm**.
- E (**Evolves**) (**Enlarge**) → Grows upwards, downwards, outwards as a flat lesion.

◙ (Question 2)

A patient with **Benign mole** that **does not** bleed or interfere with life. What should a GP do if the patient wants his mole removed?

→ **Refer to a PRIVATE Dermatology clinic. (Not Plastic, Nor NHS)**

N.B. NHS Does not usually provide Cosmetic services.

◙ (Question 3)

Malignant melanoma was excised. Which feature shows a **bad prognosis** on histopathological examination?

A) Diameter > 6mm ▌B) Varying colour ▌C) **Depth of invasion**

Diameter > 6 mm and Varying colour are **suspicious features** of benign Moles to be Malignant melanoma.

Here, it is **already malignant melanoma**. **Depth of invasion** is important for prognosis.

▣ (Question 4)

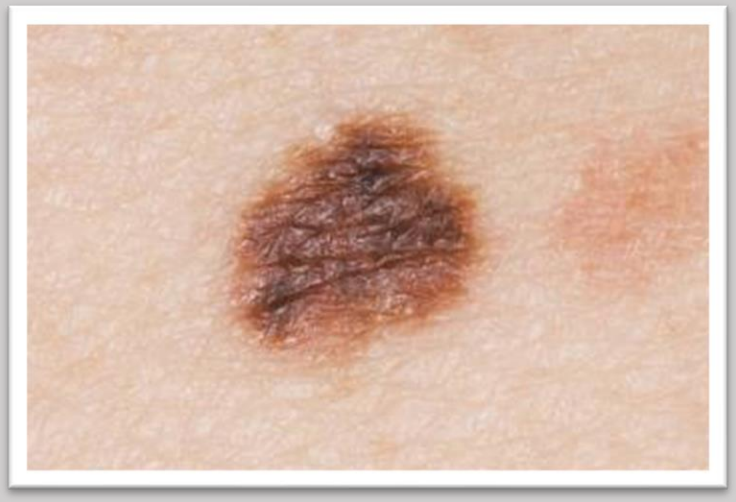
Malignant melanoma was excised. What is the **most important prognostic indicator**?

Answer → Breslow thickness = "the depth in mm".

▣ (Question 5)

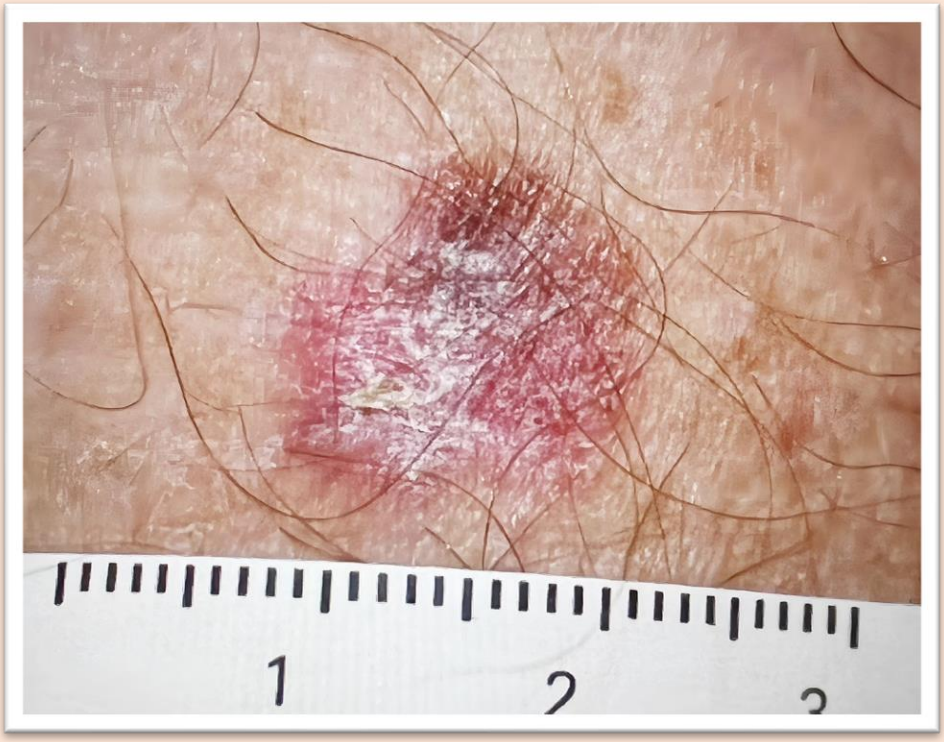
If you as a GP suspects a malignant melanoma eg (a lesion that is asymmetric, with irregular borders, largest diameter is > 6 mm, varying shades of colour)

→ Refer urgently to dermatology.



◙ (Question 6)

A 46-year-old man presents to his GP with a flat lesion on his leg. The lesion has been increasing in size slowly over one year. He has recently noticed a change in sensation in that area. It occasionally bleeds. A picture of the lesion:



What is the most likely diagnosis?

→ **Melanoma**.

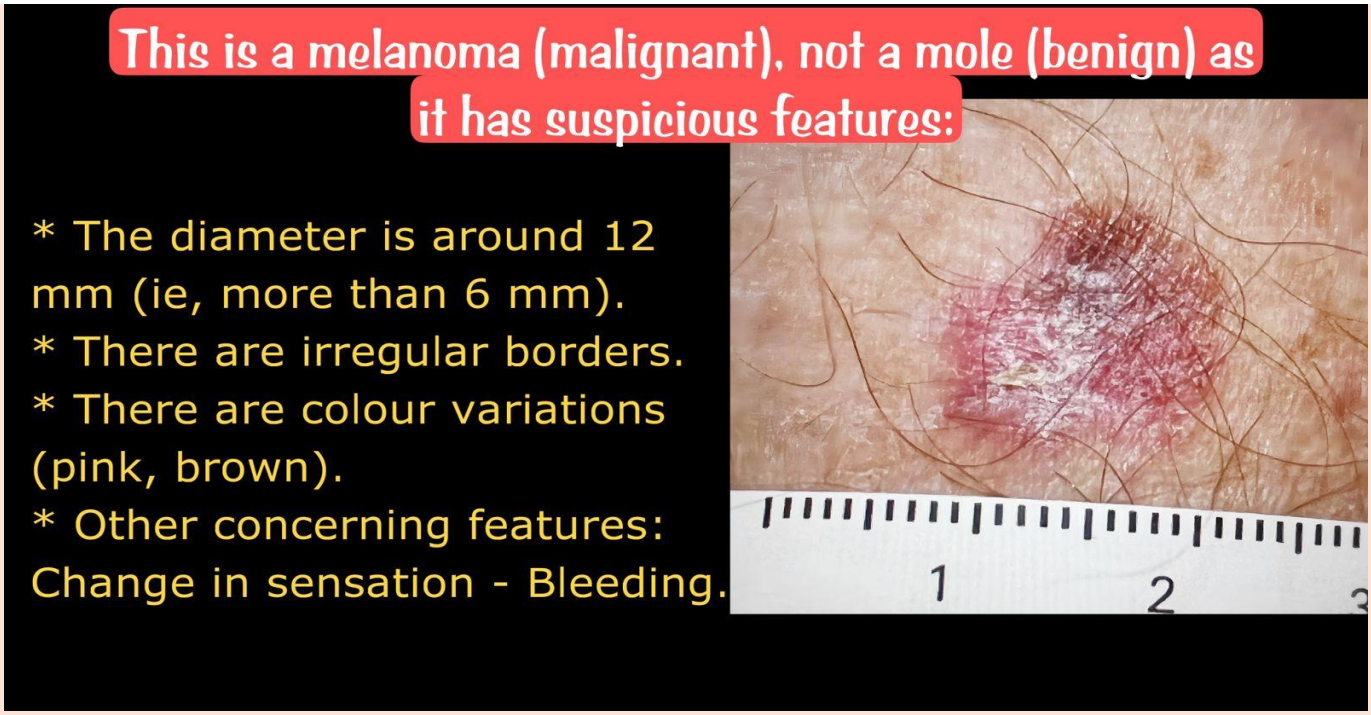
This is not a mole (benign) but most likely melanoma (malignant) as it has the following suspicious features:

* The diameter is around 12 mm (ie, **more than 6 mm**).

* There are **irregular** borders.

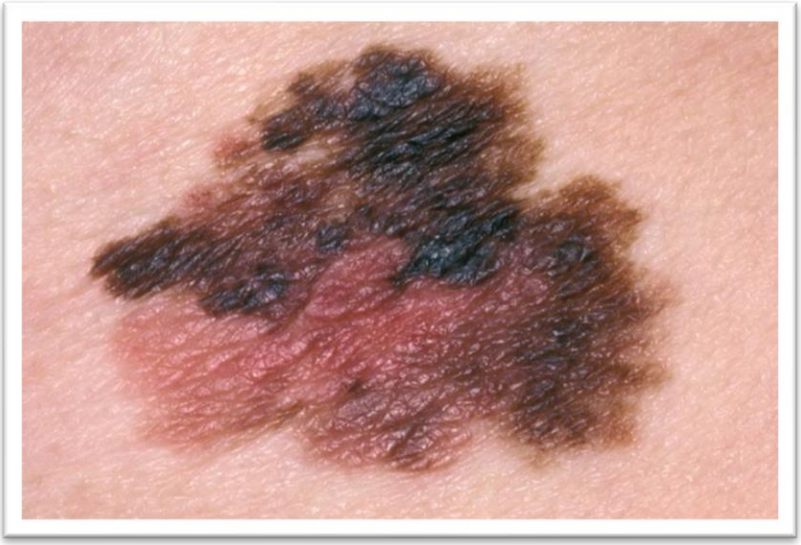
* There are **colour variations** (pink, brown).

* Other concerning features: **Change in sensation** - **Bleeding**.



Examples of Melanomas:

Superficial spreading melanoma

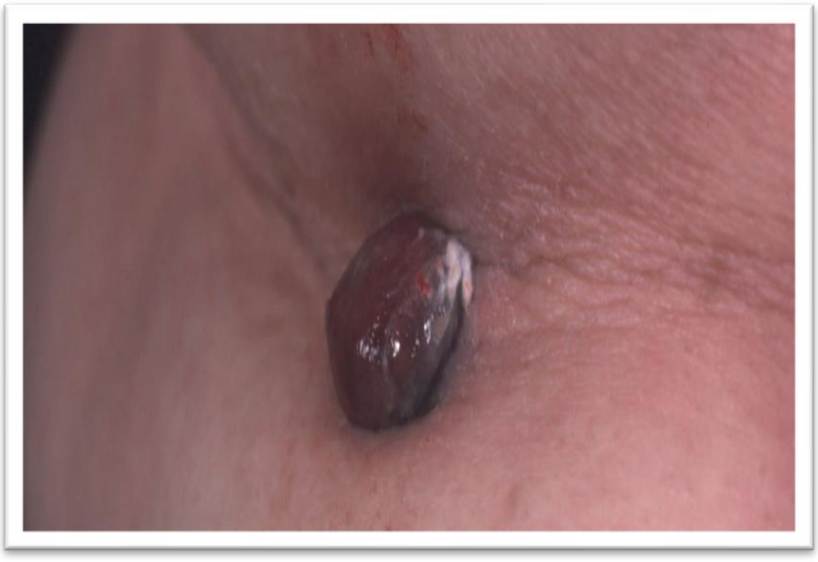


Around seven out of 10 (70%) of all melanomas in the UK are superficial spreading melanomas. They're more common in people with pale skin and freckles, and much less common in darker skinned people.

They initially tend to grow outwards rather than downwards, so don't pose a problem. However, if they grow downwards into the deeper layers of skin, they can spread to other parts of the body.

Therefore, you should see your GP if you have a mole that's getting bigger, particularly if it has an irregular edge.

Nodular melanoma



Nodular melanomas are a faster-developing type of melanoma that can quickly grow downwards into the deeper layers of skin if not removed.

Nodular melanomas usually appear as a changing lump on the skin which might be black to red in colour. They often grow on previously normal skin

and most commonly occur on the head and neck, chest or back. Bleeding or oozing is a common symptom.

On the other hand:

Compound Naevus (Benign Mole)

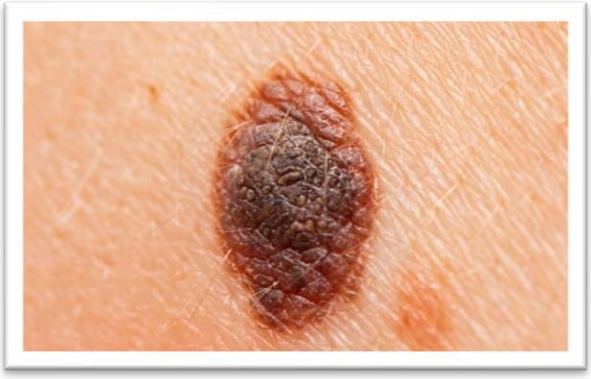
√ Benign skin lesion.

√ Slightly elevated, well-defined moles, with a uniform colour.

√ Compound naevi can occur anywhere on the body.

√ They are usually harmless and require no treatment unless there is a change in their appearance that suggests a malignant transformation.

√ The stability of their appearance without changes over years is more suggestive of benign (mole/ naevus) rather than malignant (melanoma).



Compound Naevus (Benign Mole)

Systemic lupus erythematosus (SLE)

Features

Systemic lupus erythematosus (SLE) is a *multisystem*, *autoimmune* disorder. It typically presents in *early adulthood* and is more common in *women* and people of Afro-Caribbean origin.

General features	• Fatigue, fever, lymphadenopathy • **Mouth ulcers (large, multiple, painful)** • **Remitting and relapsing illness**
Skin	• **Malar** (butterfly) **rash**: spares nasolabial folds • discoid rash: scaly, erythematous, well demarcated rash in sun-exposed areas. Lesions may progress to become pigmented and hyperkeratotic before becoming atrophic • **Photosensitivity** • **Raynaud's** phenomenon (1/5th of the patients but often mild)
Musculoskeletal	• **arthralgia** • non-erosive **arthritis**
Cardiovascular	• **Pericarditis**: the most common cardiac manifestation • myocarditis
Respiratory	• pleurisy

	• fibrosing alveolitis
Renal	• **Proteinuria** • **Glomerulonephritis** (diffuse proliferative glomerulonephritis is the most common type)
Neuropsychiatric	• **Anxiety and depression** • psychosis • seizures

Immunology

- 99% are **ANA positive (screening = sensitive but not specific)**
- 20% are rheumatoid factor positive
- **anti-dsDNA**: highly specific (> 99%), but less sensitive (70%)
- anti-Smith: the most specific (> 99%), sensitivity (30%)

- **Anti-histone: Drug-induced lupus (e.g. due to isoniazid -a TB drug- or hydralazine that is used for HF along with isosorbide dinitrate)**

Others: Raised ESR, Normochromic Normocytic Anemia, low C3 and C4.

In Short,

◙ **The initial (Screening) test for SLE**

→ **ANA "Anti-nuclear antibody" (the most sensitive).**

◙ **The Confirmatory test for SLE**

→ **Anti-dsDNA (Specific).**

◙ **In drug-induced lupus (e.g., 2ry to hydralazine, procainamide, isoniazid)**

→ **Anti-histone antibodies.**

Drug-induced lupus

√ In drug-induced lupus, not all typical features of systemic lupus erythematosus are seen.

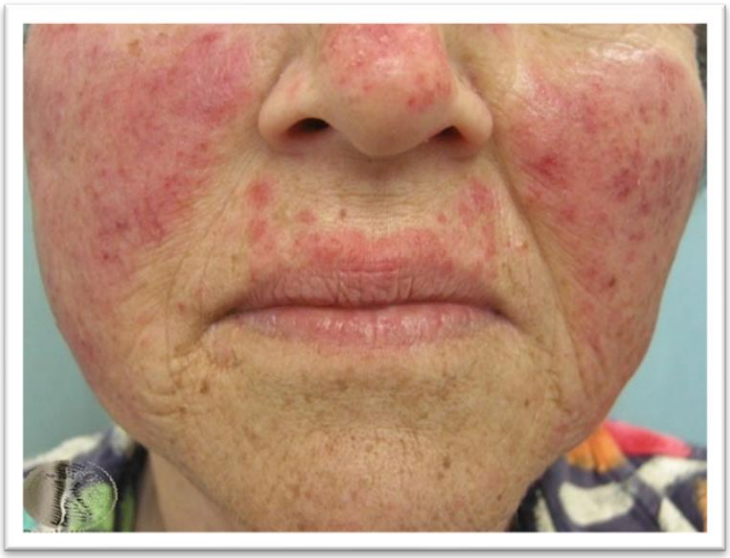
√ **renal** and **nervous** system involvement is **Rare**.

√ **It usually resolves on its own after stopping the causative drug.**

Features

- **Arthralgia**
- **Myalgia**
- Skin (e.g., **malar rash**) and pulmonary involvement (e.g. **pleurisy**) are common
- ANA: positive in 100%,

- dsDNA: negative,
- **Anti-histone antibodies** are found in 80-90% (usually the answer).



Most common drugs that cause "drug-induced lupus"

- **Procainamide** (antiarrhythmic medication)
- **Hydralazine** (vasodilator, used for HF and HTN)

Less common causes

- **Isoniazid** (Anti-TB) "a stem may mention receiving TB drugs only"
- minocycline
- phenytoin

Urticaria

- **Wheals**: Central **itchy** white papules or plaques surrounded by erythema.
- They are variable in size and shape.
- ± **Swelling** of soft tissues (eyelids, tongue, lips) → **Angioedema**.
- Come and go within a few minutes or hours.

  (***Here today and gone tomorrow***).
- **Acute urticaria**: present for **less than** 6 weeks.
- **Chronic urticaria**: present for **more than** 6 weeks.

Aspirin and **Opiates** may elicit the release of ***histamine*** from mast cells

→ **Urticaria**.

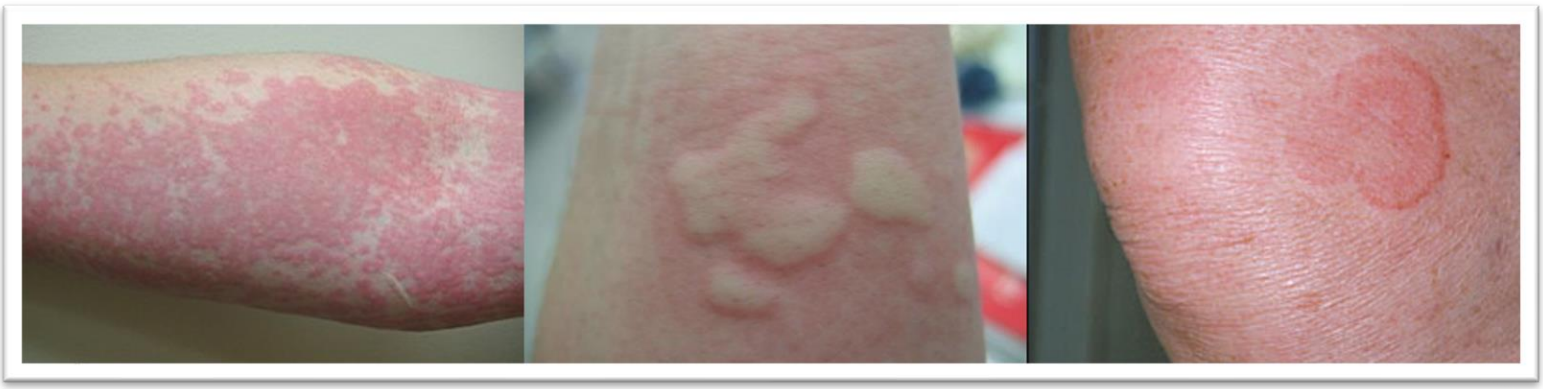
Management of Urticaria:

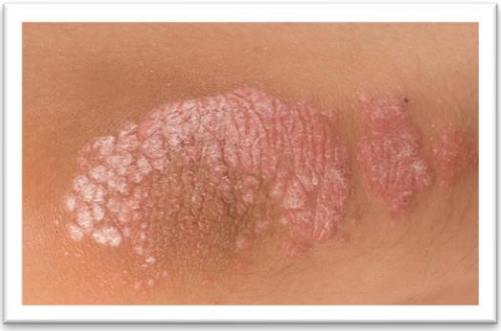
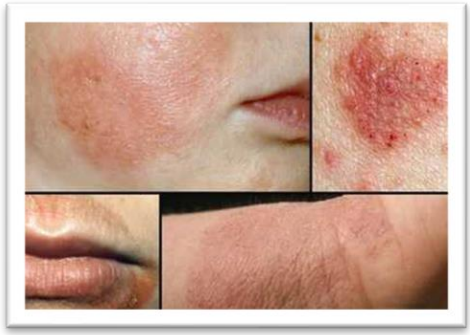
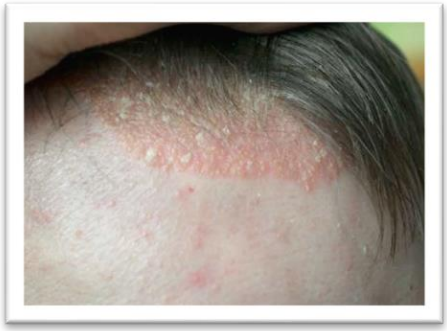
√ Treat the cause and the aggravating factors:

e.g., Stop ***Aspirin***, ***Opiates***, ***Overheating***, ***Stress***, ***Alcohol***, ***Caffeine***.

√ Non-sedating H1 Anti-Histamines e.g., Cetirizine, Loratadine.

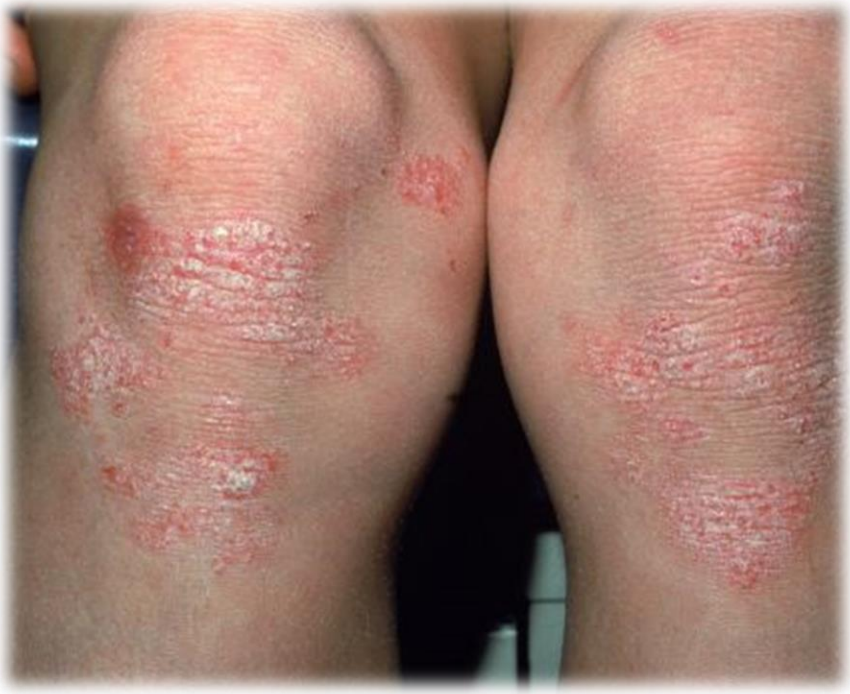
√ In **pregnant**, give **Sedating** Anti-Histamine e.g. **Chlorpheniramine**.

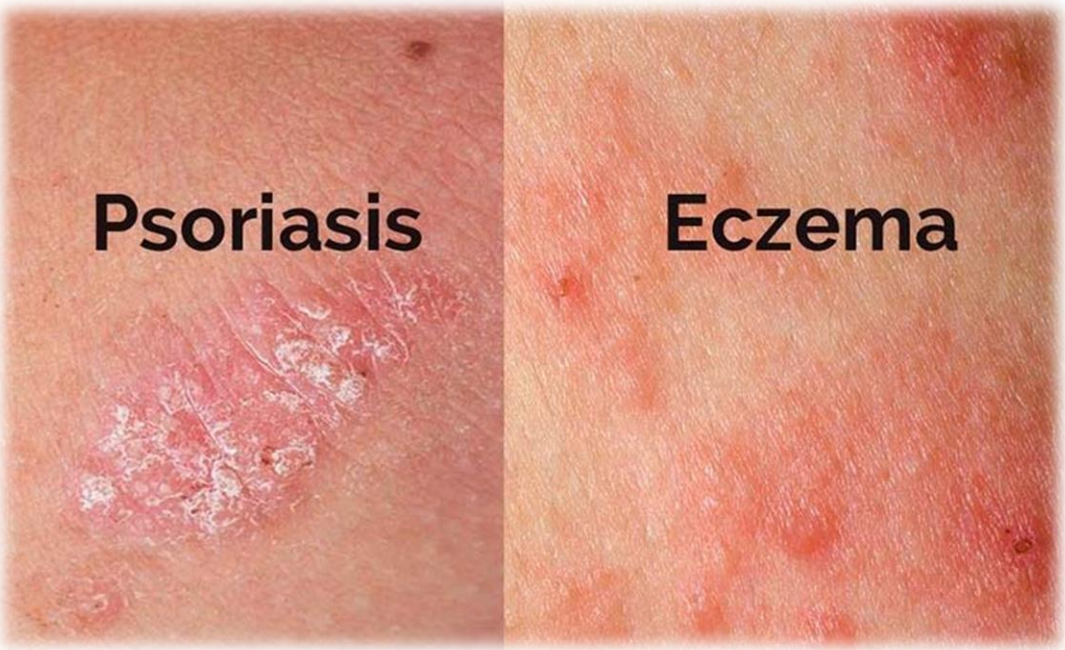


Psoriasis	Eczema	Seborrheic dermatitis
		
• ***Itchy***, **scaly**, well demarcated, circular or oval, reddish, **elevated** lesions (Plaques). • overlayed with **white** or **silvery scales**. • It can be on elbows, knees, **Scalp**…etc. • **NOT Contagious** • On the ***Extensor*** surfaces and Scalp.	• Chronic, Relapsing Inflammatory skin condition. • ***Itchy*** red rash. • Affects **skin creases (Flexures)** (eg, **wrist**, **elbow folds**, **behind** the **knees, face in babies**). • Triggered by environmental irritants and allergens. **Also,**	• **Scaling rash**. • Affects **sebaceous glands**. • Found on **face**, **scalp** chest. • Inflammatory reaction to yeast. • Presents as inflamed, **greasy areas** with fine **scaling**.

• Strong **Genetic** Basis. • Vigorous Scraping → Pinpoint Bleeding → **Auspitz' Sign**. • New lesions appear at sites of injury of the skin → **Kobner's reaction**. • **Family Hx** is often given as a hint. • It is a chronic **relapsing** (come and go) condition. • **ACE inhibitors** **worsen** psoriasis. • ± Nail changes (pitting, onycholysis). • Lithium intake exacerbates psoriasis.	**URTIs can cause a flare up of eczema**. • Family Hx of atopic diseases (eg, **Asthma**, **Hay fever**).	• Can present as **dandruff** when on scalp.
Rx: - **Topical Corticosteroids** - **Vitamin D analogues** - **Tar preparations**	Rx: - **Emollients (1st line)** - **Topical Steroids**	Rx: - **Regular Antifungal** - **Intermittent topical steroids**

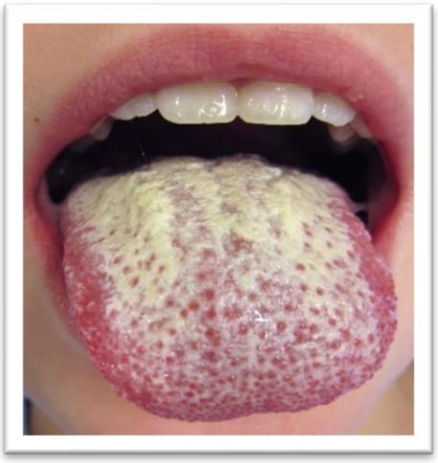
Other Images for Psoriasis:

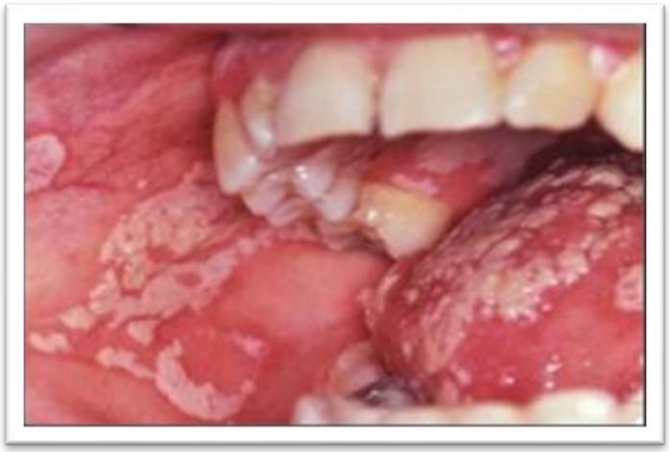




Differentiating white oral lesions

Oral Thrush (Oral Candidiasis)



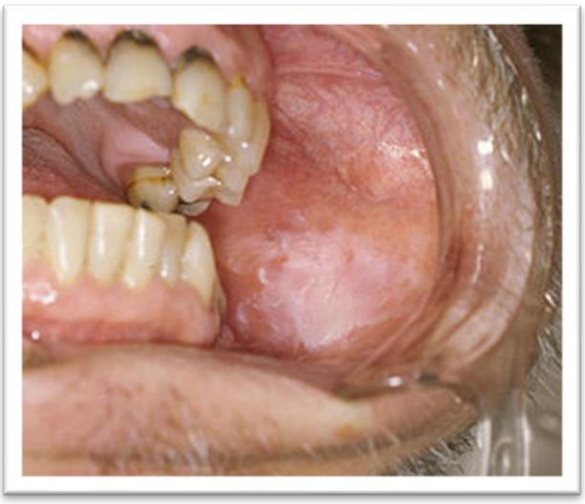


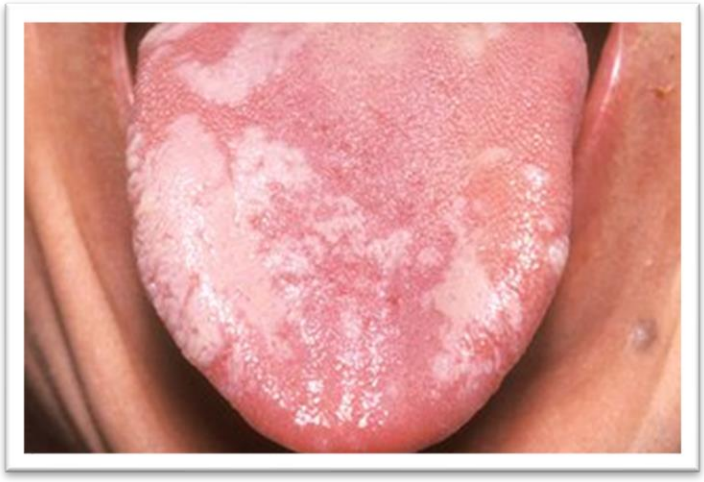
- Hx of **immunosuppression** (e.g. Taking oral or inhaled **corticosteroids**),
- Hx of **smoking**.
- **Thick** white marks ± **Inflamed** mouth/ tongue.
- **Note that Plaques might enlarge and become painful, causing discomfort while eating and swallowing.**
- **It might also present with red inflamed painful sore mouth angles.**
- **Can be rubbed out.**

Management of oral thrush:

- Stop Smoking.
- Good inhaler techniques, spacer device, rinse mouth with water after use.
- **Oral Fluconazole 50 mg OD for 7 days or Fluconazole oral suspension.**

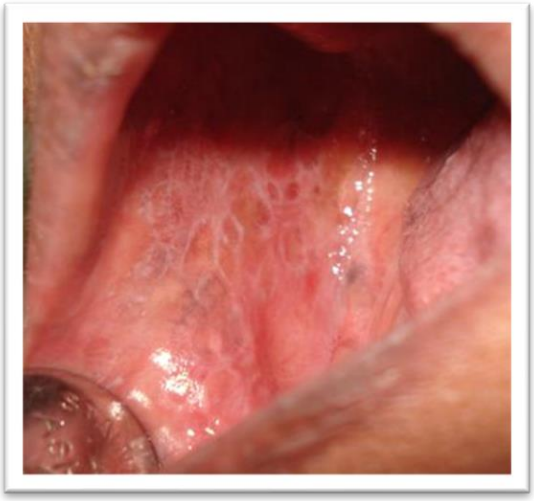
Leucoplakia





- Hx of **Smoking**.
- Raised edges, bright white patches, **sharply well-defined edges**.
- **Cannot be rubbed out!**
- Rx → Stop Smoking + biopsy (as they are premalignant).

Oral Lichen Planus



- **Lace like appearance. (Cannot be removed)**

- **Remember also in Lichen Planus:**

4Ps + F: **p**urple, **p**ruritic "itchy", **p**olygonal, **p**apular rash on **f**lexor surfaces.

Q) A 58 YO woman presents complaining of 6 weeks of irregular white streaks on her tongue sides and buccal mucosa. They are adherent and difficult to be removed by spatula. She also has persistent painful tongue ulcers. She does not smoke.

The likely Dx → lichen planus

√ **Oral Candidiasis** → Thick white marks + Can be rubbed out ± Inflamed mouth.

√ **Leukoplakia** → White marks, cannot be rubbed out, sharply defined.

Eczema in infants & children

√ Eczema occurs in around 15-20% of children and is becoming more common.

√ It typically presents before the age of 6 months but clears in around 50% of children by 5 years of age and in 75% of children by 10 years of age.

Features

- **In infants the face and trunk are often affected then extremities.**
- **In younger children, eczema often occurs on the extensor surfaces.**
- **In older children, a more typical distribution is seen, with flexor surfaces affected and the creases of the face and neck**

Management of Flare-ups of Atopic Eczema

- 1st line → **Emollients** (at least BID) + washing, bathing (Moisturising).
- 2nd line → **Topical Steroids** (for eczema itself). Examples:

Mild strength	**Hydrocortisone acetate** (**0.5**% or **1**% or **2.5**%). *This is to be started if mild eczema or a new case that is not responding to emollients alone.* *(If still not responding, try a more potent option).*
Moderate strength	Betamethasone valerate (0.025%) Clobetasone butyrate (0.05%) (*for moderate eczema: WIDE area of dryness, crackling, redness*) ***imp √***
Potent strength	**Betamethasone valerate (0.1%)** **Mometasone 0.1%** (*for severe eczema that causes bleeding, intense itching that prevents sleeping, and not responding to emollients and hydrocortisone*) ***imp √*** Hydrocortisone Butyrate
Very potent strength	Clobetasol propionate

It is important to know each of these types of topical steroids as in the recent exams, some questions give a scenario of a moderate or severe eczema and ask about the appropriate steroid to be used.

Important: if emollients and topical steroids are to be given together

→ Apply Emollient first, then wait for 30 minutes, then apply the Topical steroids.

"Creams soak into the skin faster than ointments"

Other Lines:

- Avoid irritants and stress.
- Treat bacterial infection if present with oral Flucloxacillin (1st line) ''rarely the answer''.
- If the eczema awakens the patient at night → consider adding sedative antihistamine (e.g., chlorpheniramine).

Side Note:

Clotrimazole is a topical antifungal agent with many uses such as:

→ **Athlete's foot**, **fungal groin infections**, **fungal nappy rash**

Side Notes:

√ **Itching** without features of anaphylaxis (e.g., after insect bite)

→ give **oral anti-histamine**.

√ If severe reaction develops (e.g., affecting breathing)? → **IM Adrenaline**.

Basal cell carcinoma = Rodent Ulcers

- Basal cell carcinoma (BCC) is one of the three main types of skin cancer.
- Lesions are also known as **Rodent Ulcers**.
- Characterised by **slow-growth** and **local invasion**.
- Metastases are extremely rare.
- ***BCC is the most common type of cancer in the Western world***.

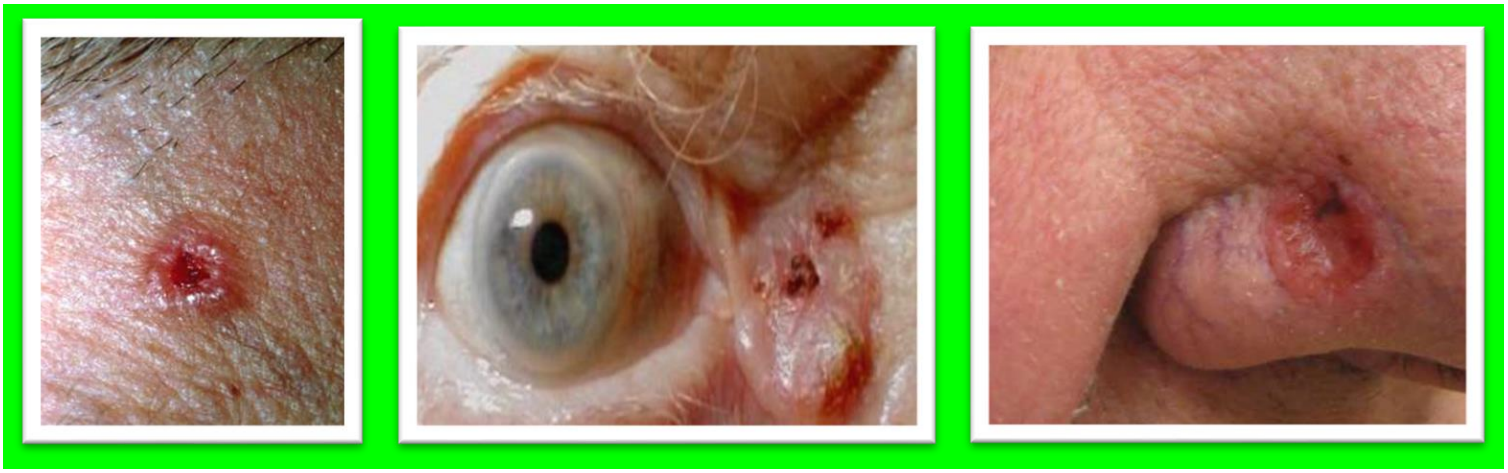
Features of BCC:

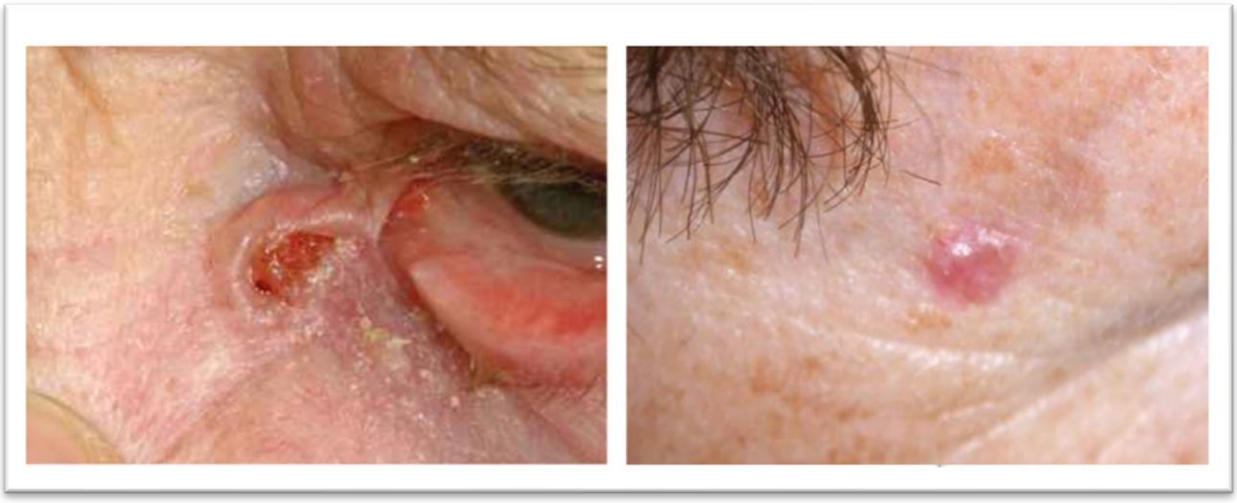
- Many types of BCC are present.
- The most common type is **Nodular** BCC, which is described here.
- **Sun-exposed sites**, especially the **head** and **neck** account for the majority of the lesions.
- Initially → **pearly**, flesh-coloured papule with **telangiectasia.**
- May later **ulcerate** leaving a central "crater"

For PLAB 1: Pearly white umbilicated ulcer with central depression → BCC.

Management options:

- surgical removal
- curettage
- cryotherapy
- topical cream: imiquimod, fluorouracil
- radiotherapy



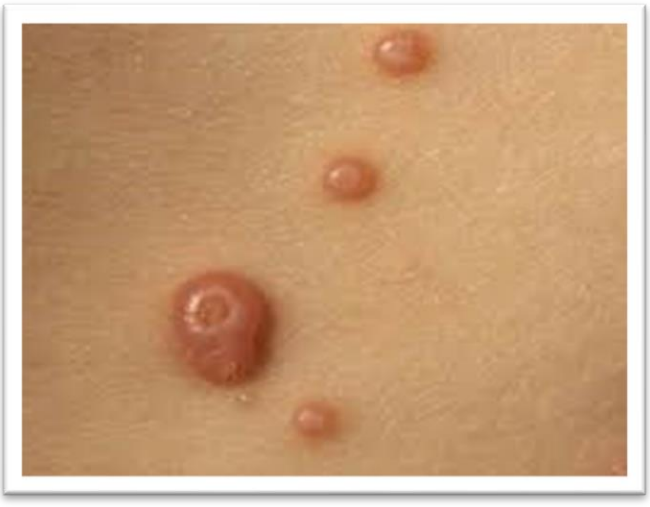


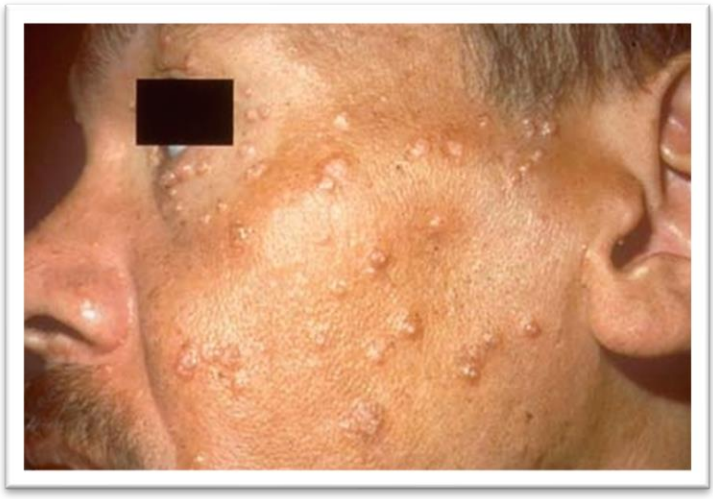
Basa Cell Carcinoma "Rodent Ulcer"

Pearly white umbilicated ulcer in H&N with central depression "Crater"

Molluscum Contagiosum (Pox Virus)

- White or pink round papules with an **umbilicated** (**depressed**) central punctum.
- They may be found anywhere on the skin.
- **They resolve spontaneously within 6-24 months** → **Reassure**. √
- If **squeezed**, they produce **cheesy, or white material**.
- They usually affect ***children***, and ***immunocompromised*** patients (eg, **AIDS**). So, if a patient presents with extensive pink umbilicated papules, consider AIDS.
- **Remember**: **CHILDREN**, **HIV** (**AIDS**), think → **Molluscum Contagiosum.**





Molluscum Contagiosum (Poxvirus) in Points:

- **Appearance**: White or pink, firm, dome-shaped/ round papules with a central umbilicated (depressed) punctum.
- **Location**: Can appear anywhere on the skin.
- **Resolution**: Spontaneously resolves. It can take up to 6-24 months; → reassurance is often sufficient.
- **Content**: Squeezing the lesions produces cheesy or white material.
- **Commonly Affects**: Children and immunocompromised individuals (e.g., HIV/AIDS patients). Extensive lesions may indicate underlying immunosuppression.
- **Transmission**: Spread through direct skin contact, contaminated objects (fomites), or autoinoculation. So, as long as the lesions are active, there is a potential for transmission. Once the papules disappear, the virus is no longer present on the skin, and the infection is not transmissible.
- **Management**:
    - Reassure in most cases.
    - Physical treatments like cryotherapy or curettage for persistent lesions.
    - Prevent spread by avoiding scratching and sharing personal items.

Impetigo

√ Impetigo is a **superficial <u>bacterial</u> skin infection** usually caused by either ***Staphylcoccus aureus*** or ***Streptococcus pyogenes***.

√ It can be a primary infection or a complication of an existing skin condition such as eczema, scabies or insect bites.

√ Impetigo is **common in children**, particularly during warm weather.

√ The infection can develop anywhere on the body but lesions tend to occur on the **face**, **flexures** and **limbs not covered by clothing**.

√ **Contagious**!
√ Spread is by **direct contact with discharges** from the scabs of an infected person.

√ The bacteria invade skin through minor abrasions and then spread to other sites by scratching.

√ Infection is spread mainly by the hands, but indirect spread via toys, clothing, equipment and the environment may occur.

√ The incubation period is between 4 to 10 days.

<u>Features</u>

◙ **'golden'**, **crusted** skin lesions typically found around the mouth

(**Honey-coloured crust**), **Brown**.

◙ **very contagious!**

Management

****Limited, localised Non-bullous disease** (New Update)**

√ Hydrogen peroxide cream 1% (first line). "*anti-septic*".

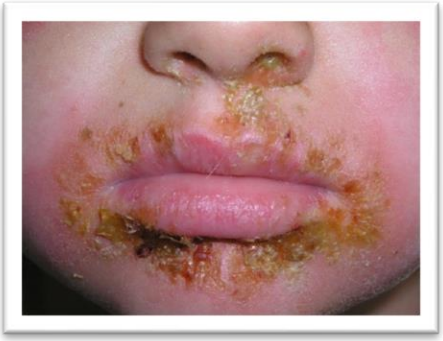
√ Fusidic acid 2% or mupirocin (2nd line). "*antibiotic*".

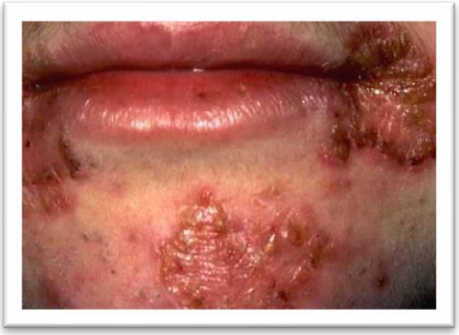
****Extensive non-bullous or bullous impetigo****

- ***Oral flucloxacillin.***
- ***Oral erythromycin*** if penicillin allergic.

Important Note

- Children should be excluded from school until the lesions are **crusted** and **healed**.
- Or: **48 hours** after commencing the **antibiotic treatment**.





Impetigo: bacterial, contagious, honey-coloured crusts, hydrogen peroxide cream is first-line, fusidic acid is 2nd line

Important Note

Impetigo that forms fluid-filled blisters usually > 1 cm is called

→ (Bullous impetigo). It is caused by Staph. Aureus. These bullae eventually rupture leaving yellow crusts.

Note that Non-bullous impetigo is more common.

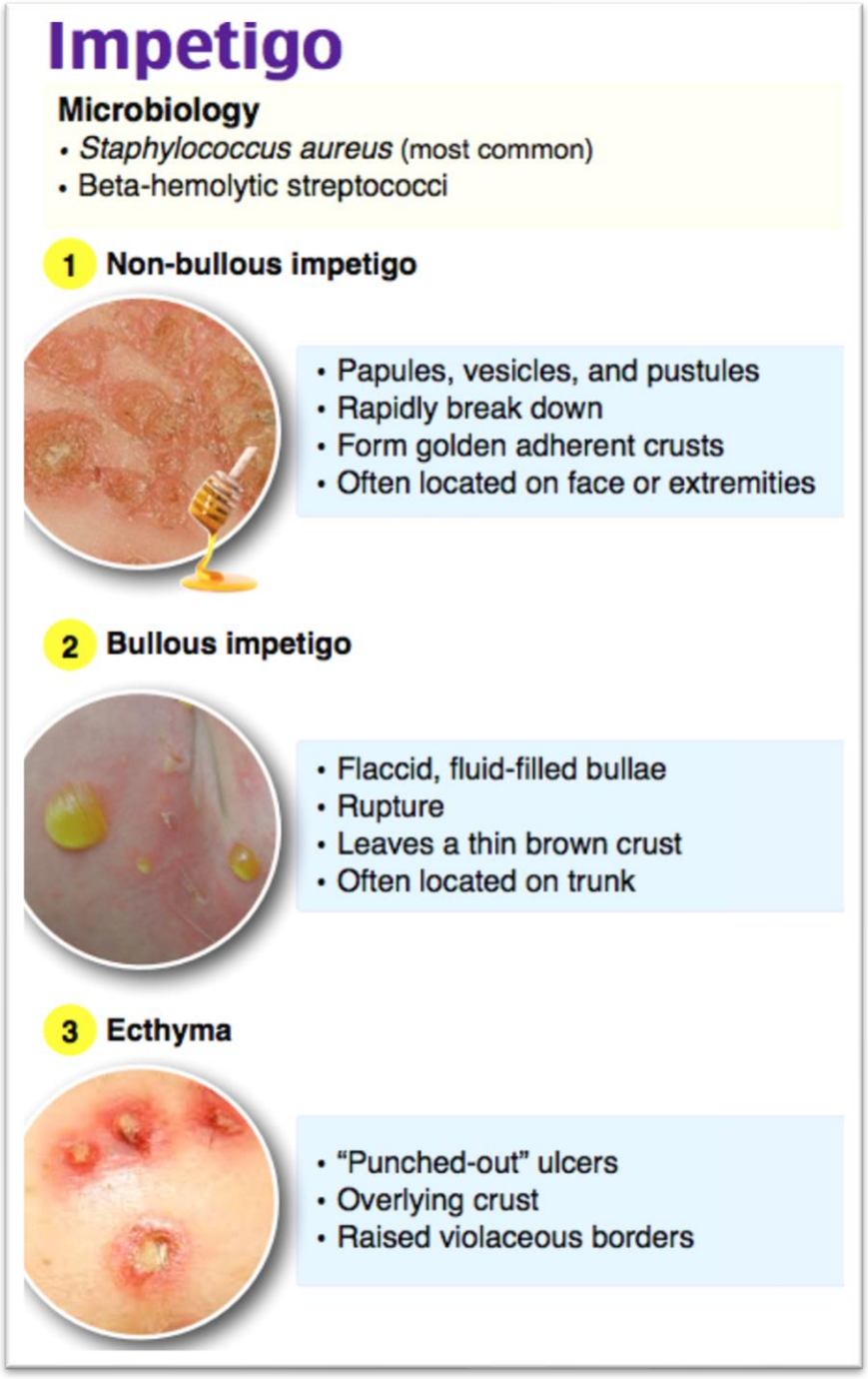
(Scenario)

A 6 YO boy has a golden-brown crust near the right periorbital area. The vesicle had ruptured 2 days ago. He has mild itching and no fever. His mother has been applying a topical antiseptic cream on the lesion over the past days. What is the most appropriate medication to use?

This is impetigo.

He has been using a topical antiseptic "hydrogen peroxide 1%" "**first line**".

Now, the **second line** is → "**antibiotics**": either **fusidic acid** or **mupirocin**.

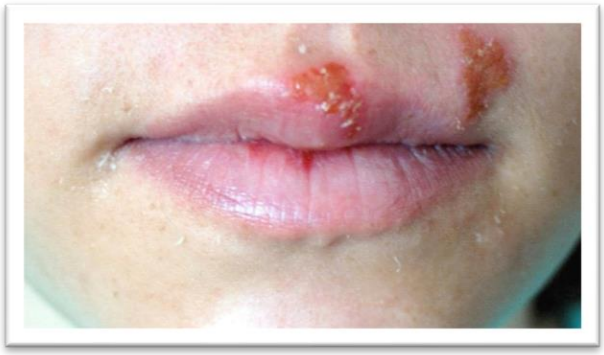


Note, if the rash is painful and associated with fever, especially in a child with Hx of eczema → consider eczema herpeticum, and give aciclovir (antiviral).

Impetigo or Cold Sore of Herpes Simplex Virus?

Points towards Cold Sore of HSV:

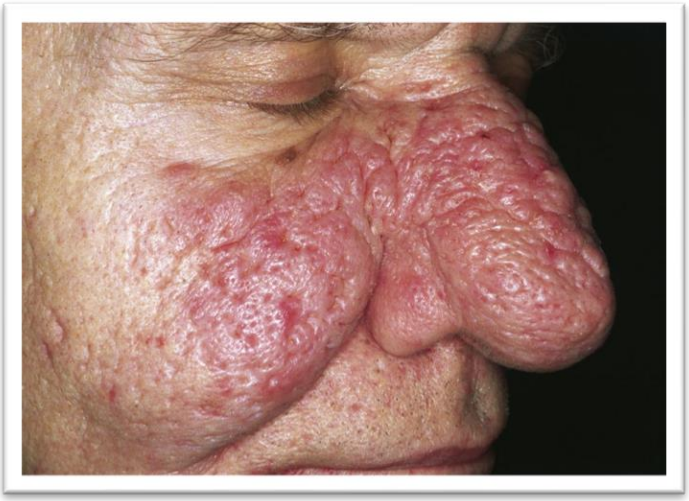
- **Hx of Recurrent episodes**
- **Pain (tingling, itching, burning) before the onset of vesicles (prodromal pain)**
- **Vesicles initially filled with clear fluids**
- **In Adults**



Acne Rosacea: a chronic skin disease of unknown aetiology.

Features

- Typically affects **nose**, **cheeks** and **forehead.**
- **Flushing** is often the first symptom (especially after **alcohol** or **sunlight** exposure).
- Telangiectasia is common.
- Later develops into *persistent erythema with **papules** and **pustules***
- **Rhinophyma: Nose disfigurement √**
- Ocular involvement: blepharitis



(Rhinophyma) in Acne Rosacea

N.B. Rosacea means (Red), red nose, red cheeks, even after alcohol → Flushing!

Management of Acne Rosacea (important)

◙ If **erythema** (redness) predominant → topical brimonidine.

◙ If **papules/ pustules** predominant:

√ First line → ivermectin. √

√ Second line → topical metronidazole.

◙ More **severe** disease is treated with additional **systemic antibiotics** eg, **Oxytetracycline, Tetracycline.**

Among the most famous **rosacea** sufferers is the former US President **Bill Clinton**

Tinea Capitis

√ It is a **fungal infection** involving the hair follicles and causing hair loss (**Alopecia**) very rapidly.

√ Because of the risk of **scarring**, treatment is with **a systemic (oral) antifungal** such as → **Oral Terbinafine**, **itraconazole**, or **fluconazole**.

√ In children, **Griseofulvin** is used.

Tinea capitis. Give oral "systemic antifungal" e.g. → **Oral Terbinafine**.

Very important Side Note:

Dermatitis Herpetiformis is linked to celiac disease!

√ So, a patient with bloating, loose stools, abdominal pain, iron deficiency anemia, folate deficiency → **Celiac disease**.

√ With ***Severely ITCHY Rash*** distributed over scalp, sacrum, elbows, knees

→ **Dermatitis Herpetiformis.**

√ In Celiac Disease: **Tissue Transglutaminase IgA**, **endomysial Abs** are **+positive**.

- In Allergic reaction with urticaria → **Oral Anti-histamine eg, Cetirizine, Loratadine**
- If Anaphylaxis (e.g., Difficulty breathing) → **IM Adrenaline**

** ***Indications of IM Adrenaline in Anaphylaxis:***

- *Hoarseness of voice*,
- *Wheezes*,
- *SOB*,
- *Stridor*,
- *Shock*,
- *Facial*, *Tongue*, or *Cheek swelling*.

Skin disorders associated with pregnancy

Polymorphic Eruption of Pregnancy (PEP)

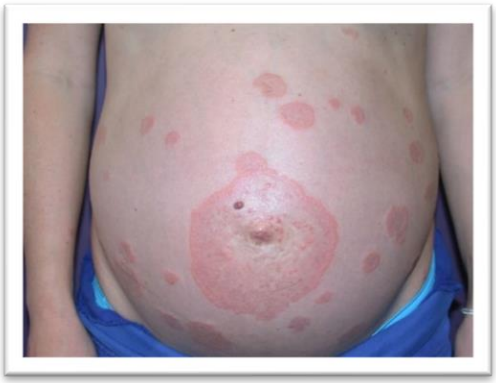
= Pruritic Urticarial Papules and Plaques of Pregnancy (PUPPP)

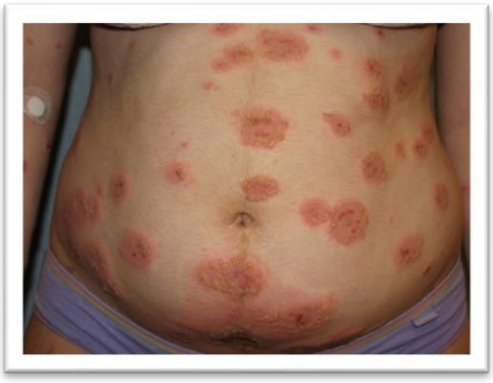
- Pruritic (**Itchy urticaria-like rash**) condition
- Usually occurs during the **last trimester**
- "Usually in the first-time pregnancy ie, **primiparous**".
- The lesions often first appear as abdominal striae.
- **No Blisters.**
- **Spares the umbilicus.**
- The management depends on the severity

  → emollients, mild potency topical steroids and oral steroids may be used.

Pemphigoid gestationis

- pruritic **blistering** lesions
- often develops in the **peri-umbilical** region and later spread to the trunk, back, buttocks and arms
- usually presents in the **2nd** or **3rd** trimester and is rarely seen in the first pregnancy
- ***oral corticosteroids*** are usually required





Note that **Polymorphic Eruption of Pregnancy (PEP)**

= **Pruritic Urticarial Papules and Plaques of Pregnancy (PUPPP)**

It is Pruritic (Itchy urticaria-like rash)

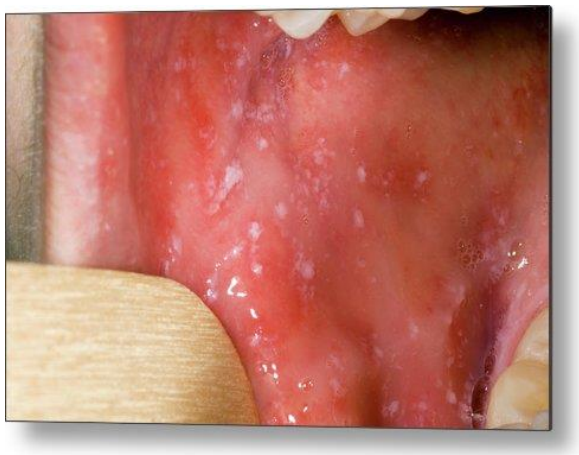
However, there are **no** associated blisters, bullae or vesicles. Also, it tends to **spare the umbilicus**.

N.B. Obstetric Cholestasis DOES NOT present with a rash.

Side Notes:

- **Contact dermatitis → redness and itching of a single affected area.**
- **Chickenpox → systemic symptoms (fever and malaise) + Vesicles on face, neck, trunk.**
- **Measles → "K": Koplik spots, Cough, Coryza, Conjunctivitis.**

  (Explained in the pediatrics chapter**)**



Koplik Spots in measles

Erythema multiforme

Erythema multiforme is a **hypersensitivity reaction** that is most commonly triggered by **infections**. It may be divided into minor and major forms. Previously it was thought that Stevens-Johnson syndrome (SJS) was a severe form of erythema multiforme. They are now however considered as separate entities.

Features

- **Target lesions**: a vesicle surrounded by an often hemorrhagic maculopapule.

(Dusky red blistering centre, with surrounding pale area)

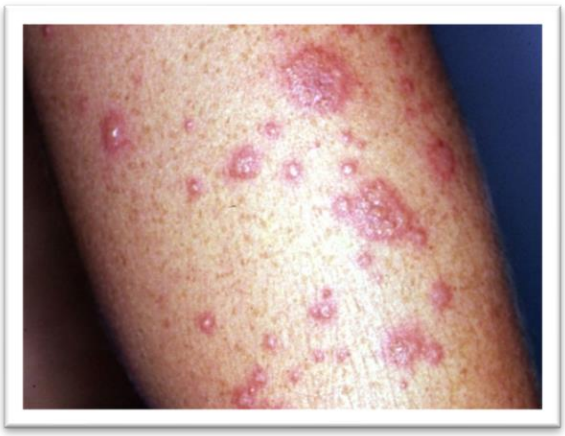
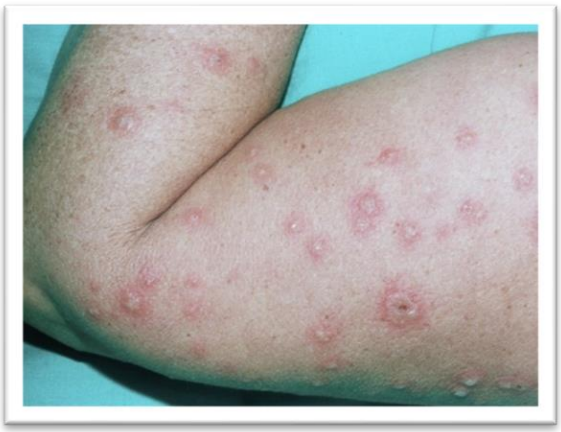
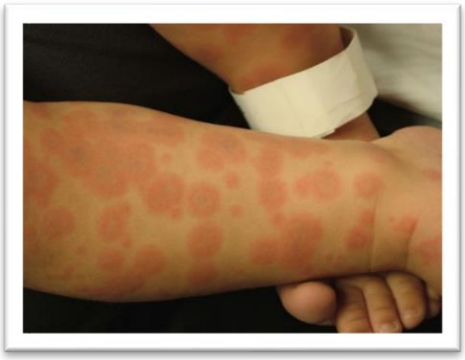
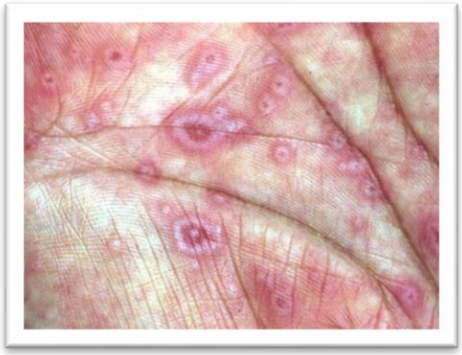
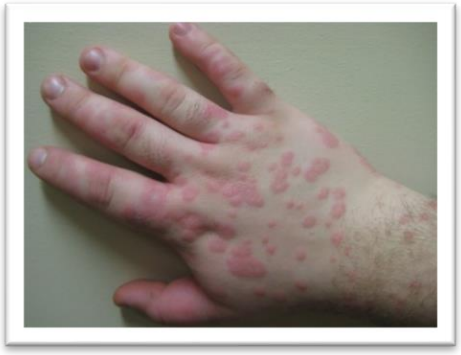
- **Initially seen on the back of the hands / feet before spreading to the torso (the trunk).**
- upper limbs are more commonly affected than the lower limbs
- **pruritus** is occasionally seen and is usually mild.

Causes (the red coloured are more important for PLAB 1)

- **Viruses**: **Herpes simplex virus (HSV)** (the most common cause),
- **Idiopathic**
- **Bacteria**: **Mycoplasma (e.g. Mycoplasma Pneumonia),**

  Streptococci (Streptococcal sore throat).
- **Drugs**: **Penicillin (e.g., Amoxicillin)**, sulphonamides, carbamazepine, allopurinol, NSAIDs, oral contraceptive pill.

- **Connective tissue disease** e.g., Systemic lupus erythematosus.
- **Sarcoidosis**
- **Malignancy**

Erythema Multiforme

(Hypersensitivity reaction to several factors e.g.

HSV, Mycoplasma pneumonia, Penicillin – amoxicillin)

Example: eruption of erythema multiforme on the back of hands first then on trunk and different parts of the body after streptococci infection, mycoplasma pneumonia, or taking antibiotics for URTI (penicillin; amoxicillin).

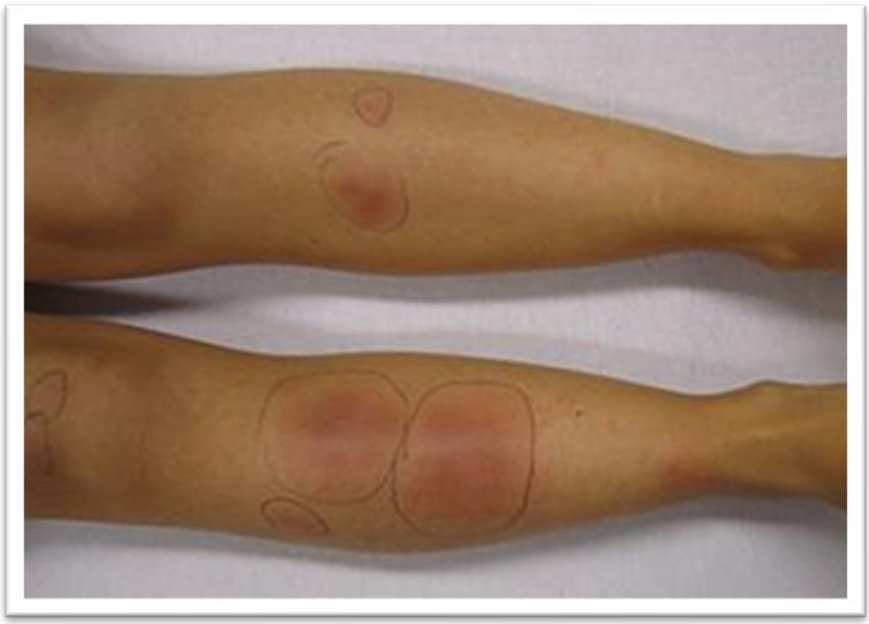
For all forms of erythema multiforme (EM), the most important treatment is usually symptomatic, including oral **antihistamines**, analgesics, local skin care, and soothing

mouthwashes (e.g., oral rinsing with warm saline or a solution of diphenhydramine, xylocaine, and kaopectate). Topical steroids may be considered.

The different Erythemas

Erythema Multiforme	**Target lesion**, Causes (look in the stem for): **HSV**, **Mycoplasma pneumonia**, the use of Penicillin (**Amoxicillin**) If extensive mucus membrane involvement → **Steven-Johnson Syndrome (**rarely asked**).**
Dermatitis herpetiformis	Severe itchy rash Associated with **Celiac disease (loose fatty stools difficult to flush, IDA, vit B12 and folic acid def.)**
Erythema Migrans	Target lesion, Cause: **Lyme Disease** (Hx of camping, walking in jungles)

Erythema Marginatum	**Rheumatic fever** (Considered in Major Jone's criteria for Rhe. fever) (Pink rings, barely raised, non-itchy)
Erythema Nodosum	**Painful tender nodules over shins** Hx of: IBD (**UC**, **CD**), **Penicillin**, **Sarcoidosis**, **TB** (India)
Erythema infectiosum (Fifth disease)	**Parvovirus B19** Children: Slapped cheek appearance The rash appears initially on the cheeks, then on the limbs and sometimes the trunk. Rx → Rest and Analgesia.
Erythema Ab Igne	Due to chronic exposure to **infrared radiation** in the form of heat *e.g., an elderly sits close to heater or fire.*



Erythema Nodosum "painful red nodules usually over shins"

Hx of Sarcoidosis, TB (India), Inflammatory bowel (UC, CD), Penicillin

Remember that:

- **Lichen Planus: On the flexor surfaces. Not Contagious.**
- **Psoriasis: On the Extensor Surfaces. Not Contagious. Itchy. ± FHx.**
- **Scabies: On the flexor surfaces. Contagious.**
- **Eczema: On the creases (Flexures). Not Contagious.**

(In infants, it usually starts on the face - cheeks, then trunk and extremities). ITCHY.

- **Molluscum Contagiosum:**

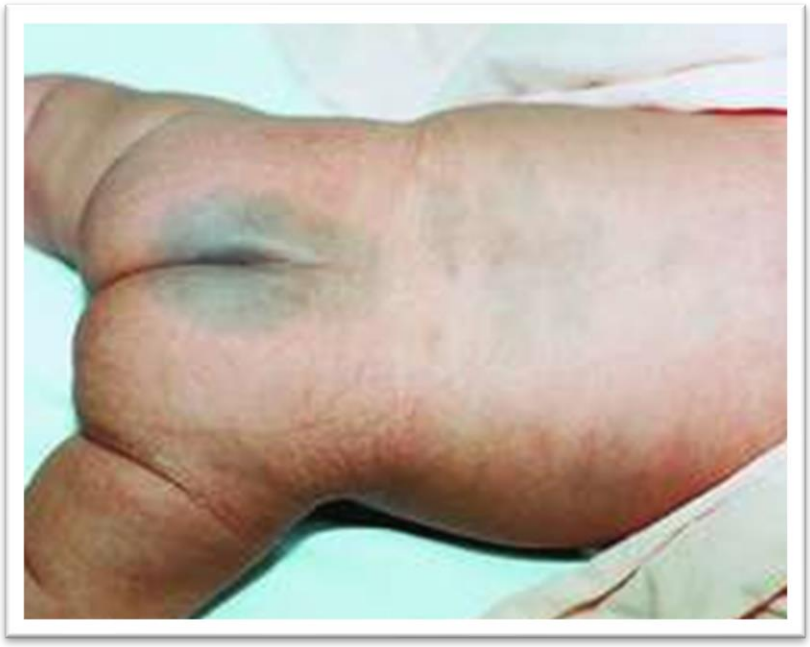
Viral, in AIDS and Children, Resolve Spontaneously, Contagious.

- **Impetigo:**

Bacterial, Golden Crusts, Children, Needs treatment (Hydrogen peroxide cream 1% is first line, Topical Fusidic Acid: 2nd Line), VERY CONTAGIOUS.

Mongolian Blue Spots = Dermal Melanosis

- *Bluish discoloration over the base of the back and the buttocks.*
- They are **benign**, pigmented, flat, **congenital birthmarks**.
- They usually fade after a few years.
- Rx → **Reassurance "inform mother that it will fade with time"**

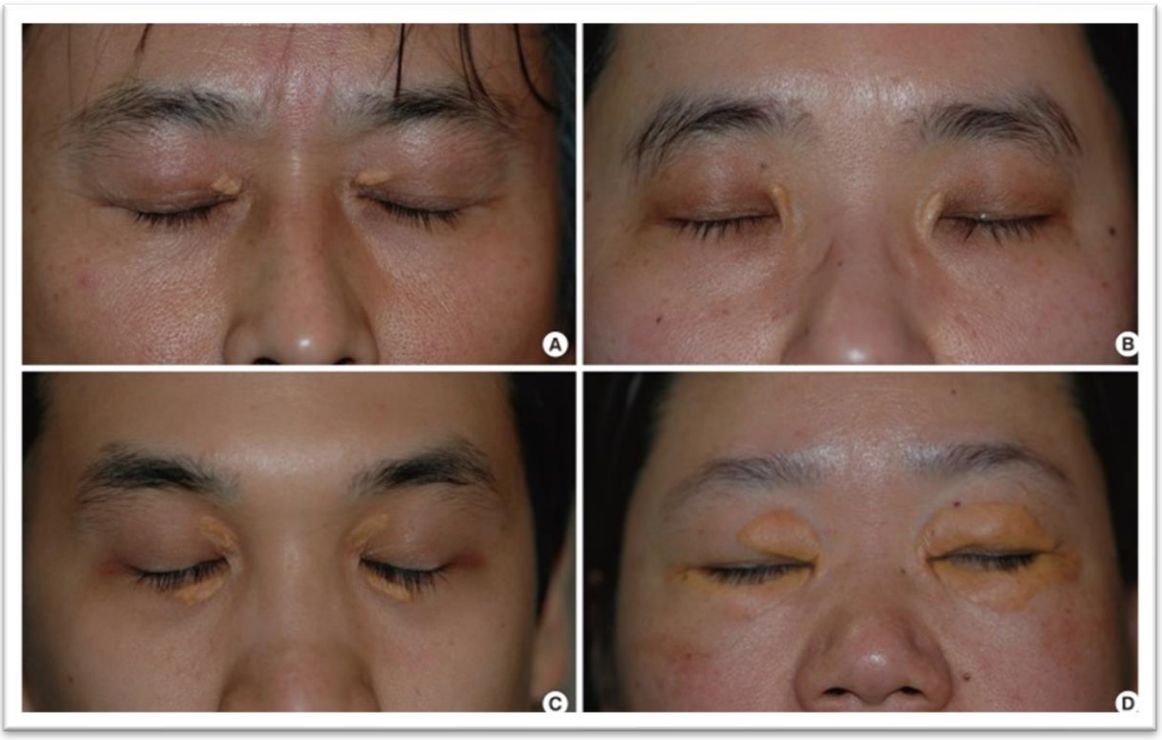


Mongolian Blue Spots = Dermal Melanosis → Reassure.

Xanthelasma

Also called (**Xanthelasmata** = **Xanthoma** = **Xanthelasma Palpebrum**).

- Multiple, different sized, **yellow**, **soft**, **raised plaques** on **eyelids**.
- They occur **with** or **without hyperlipidemia**.



Management

- Patients should have their **fasting lipid levels checked**.
- Those with **hyperlipidaemia** should have a formal **cardiovascular risk assessment** using appropriate charts, with measures for prevention of cardiovascular disease as indicated.
- The lesions can be **left alone** unless the patient wishes them removed for **cosmetic reasons** (not usually available on the NHS).

  → Thus, a referral to a **private clinic** is done.
- Various options are available including surgical excision (with or without skin grafting for large lesions), chemical treatment, laser treatment and cryocautery. Full-thickness skin grafting obtained via blepharoplasty is available. Xanthelasmas may recur after any of these interventions.

- Lipid-lowering medication and diet modification have a **limited** (if any) **effect** on these lesions.

Acne vulgaris

• Acne vulgaris is a common skin disorder which usually occurs in adolescence.

• It typically affects the face, neck and upper trunk.

• It is characterised by the obstruction of the pilosebaceous follicle with keratin plugs which results in comedones, inflammation and pustules.

◙ Pathophysiology is multifactorial

√ Follicular epidermal hyperproliferation resulting in the formation of a keratin plug. This in turn causes obstruction of the pilosebaceous follicle. Activity of sebaceous glands may be controlled by androgen, although levels are often normal in patients with acne.

√ colonisation by the **anaerobic bacterium Propionibacterium** acnes.

Important: Adding **topical benzoyl peroxide** (BPO) to the antibiotics can reduce resistant **Propionibacterium** acnes in patients with acne receiving antibiotic therapy.

√ inflammation

◙ Acne may be classified into mild, moderate or severe:

- **Mild**: open and closed comedones with or without sparse inflammatory lesions.
- **Moderate** acne: widespread non-inflammatory lesions and numerous papules and pustules.
- **Severe** acne: extensive inflammatory lesions, which may include nodules, pitting, and scarring. (In this case, Oral isotretinoin is used.).

A simple step-up management scheme often used in the treatment of acne is as follows:

◘ single topical therapy (topical **retinoids** "isotretinoin", benzoyl peroxide)

◘ Topical combination therapy (topical antibiotic, benzoyl peroxide, topical retinoid)

◘ Oral antibiotics → tetracyclines: lymecycline, oxytetracycline, doxycycline.

Tetracyclines *should be avoided in pregnant or breastfeeding women and in children younger than 12 years of age. (**Erythromycin** may be used in pregnancy).*

Retinoids *are contraindicated in pregnancy.*

◘ (COCPs) are an alternative to oral antibiotics in women. "They should be used in combination with topical agents".

◘ Oral isotretinoin: only under specialist supervision**. (Preferred in severe acne, eg, if there is scarring, pitting, and or nodules).**

Management Considerations:

√ A single oral antibiotic for acne vulgaris should be used for a maximum of three months.

√ A topical retinoid (if not contraindicated) or benzoyl peroxide should always be co-prescribed with oral antibiotics to reduce the risk of antibiotic resistance developing.

√ Topical and oral antibiotics should not be used in combination.

√ Gram-negative folliculitis may occur as a complication of long-term antibiotic use → high-dose oral trimethoprim is effective if this occurs.

√ **Pregnancy** is a contraindication to **topical and oral retinoid** treatment.

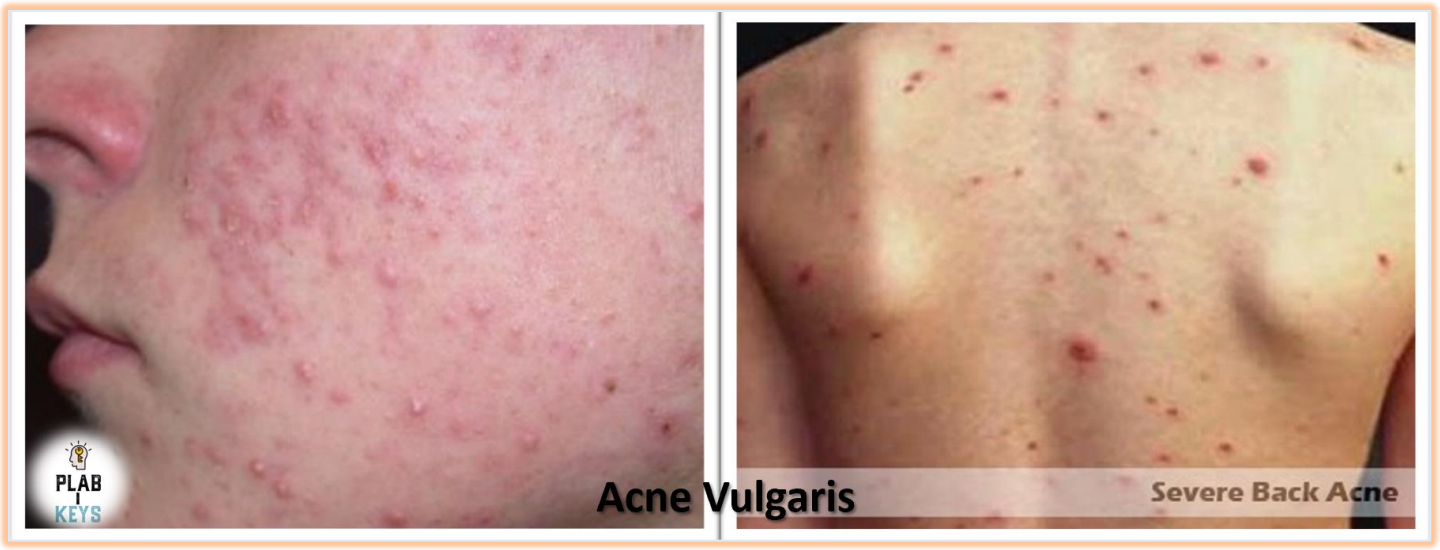
√ There is no role for dietary modification in patients with acne.

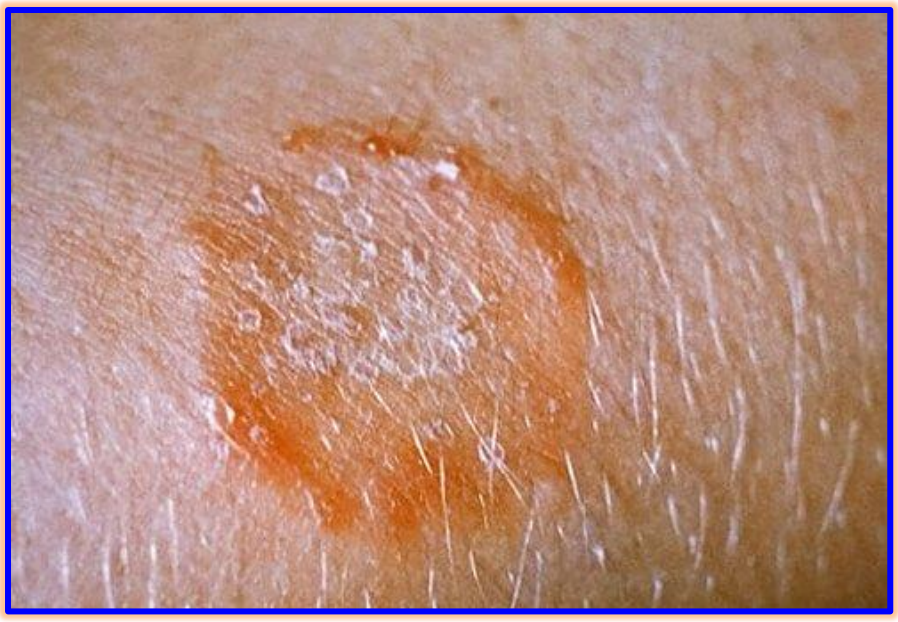
◙ Previously asked questions on Acne Vulgaris:

(Q1) Acne ⟶ give 13-cis-retinoic acid, i.e., **isotretinoin**

(Q2) A young lady with acne/ pigmentation on her face relating to menstrual cycles. She was prescribed Benzoyl Peroxide and (some other drug). These drugs act against which group of bacteria? → **Propionibacterium**

(Q3) A patient with acne vulgaris was given a medication and then she developed dry eyes, mouth, nose and frequent nose bleeds. What is the medication that was given and caused these side effects? → **ORAL isotretinoin**





Red circular itchy rash → Likely **fungal** infection

"**Ringworm infection** = **dermatophytosis**"

◙ Give → **Clotrimazole cream**

(Note, Fusidic acid "Fucidin cream" is antibacterial and thus not suitable for fungi)

Erythema infectiosum (fifth disease) Parvovirus B19

Children: Slapped cheek appearance (bright red rash on both cheeks, may spread to body, may be itchy if involves the feet soles)

A 7 YO child presents with his mother to a GP complaining of rash on cheeks sparing the nasolabial folds and the eyes. The rash started 1 day ago and soon

spread to proximal limbs and trunk. He has mild fever. One of his school mates suffered from the same rash a few days ago.

Management → **Rest and Analgesia**. "**Parvovirus is self-limiting**"

Once the rash appears, the patient becomes non-infectious

→ Thus, no need to exclude from school.

Quick Reminders:

◙ Management of Flare-ups of Atopic Eczema

- 1st line → **Topical Emollients**
- 2nd line → **Topical steroids** (the type is determined based on severity-see later)

Linear tracks on skin (**Burrows**) + **Severe Pruritus** (**itching**), especially at the skin folds "flexures" of → *wrists*, *finger webs*, *elbows*, *axilla*, areola, genitalia.

◙ The likely Dx → **Scabies**.

◙ First line treatment →**TOPICAL** **Permethrin 5%** (not 0.5%).

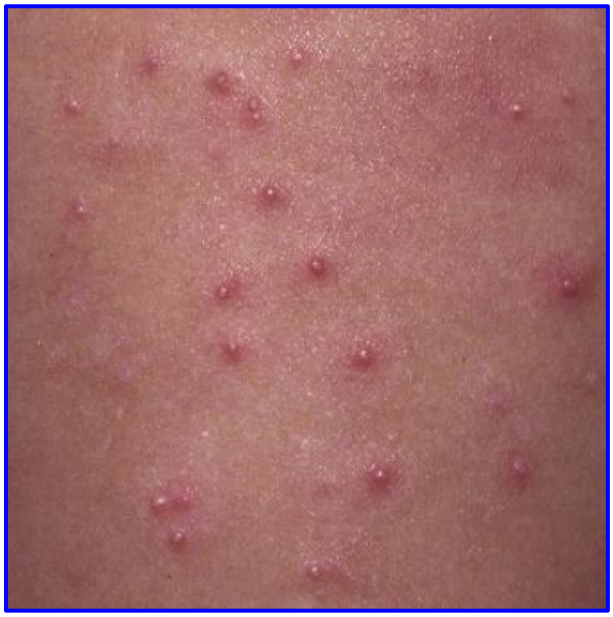
◙ The mechanism of itching → **Allergic reaction**.

♦ Usual hint → eg, a nurse came in contact with a scabies patient. An **elderly** in a **Nursing Home** ♦

[**Note**, all family members should be treated with topical permethrin 5% even if they are asymptomatic].

[**Note**, pregnancy is NOT a contraindication to permethrin].

◙ A child with rash on trunk for > 1 month. This is a picture of his rash:



The likely Dx → **Molluscum contagiosum "Pox Virus"**

- White or pink papules with an umbilicated (depressed) central punctum.
- They may be found anywhere on the skin.
- They resolve **spontaneously** within 6-24 months.
- **If squeezed, they produce a cheesy or white material**.
- They usually affect **children** and immunocompromised patients (e.g. **AIDS**). So, if a patient presents with extensive pink umbilicated papules, consider AIDS.
- Remember: **CHILDREN**, or adults with **HIV** (AIDS) → consider **Molluscum**.

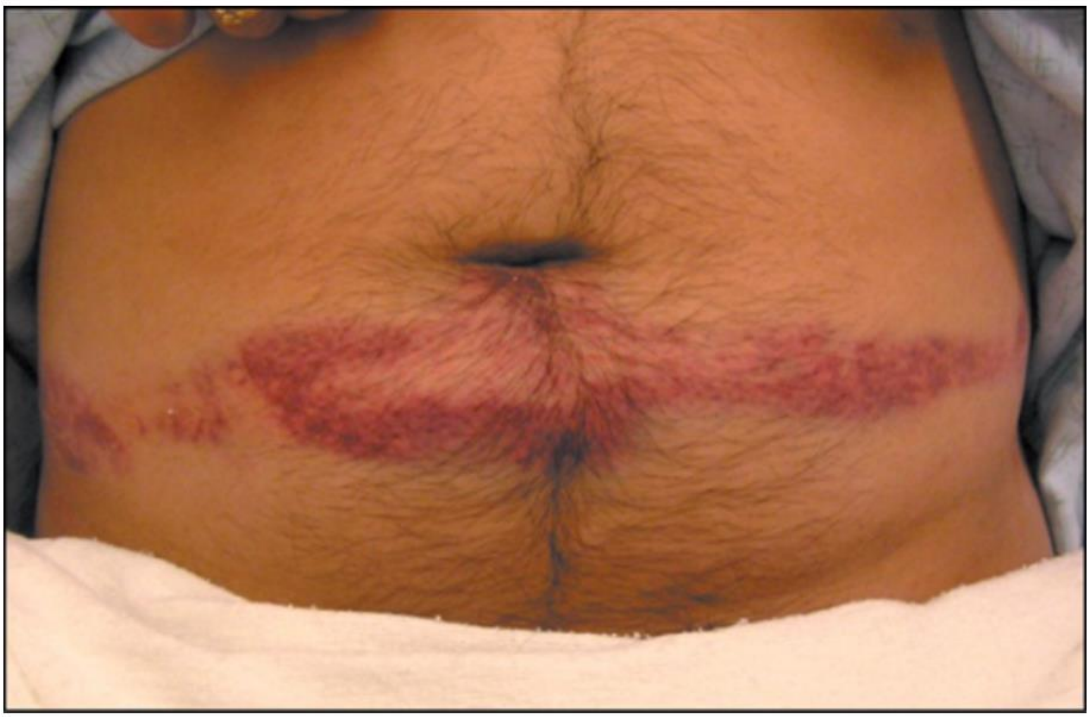
A 57-year-old male builder, has had pain in the left flank for 4 hours. He is a known diabetic and has been drug compliant.

Temp 36.7

Pulse 90b/m

BP Normal.

Based on the image, what is the likely cause of this?



a. **blunt force trauma**

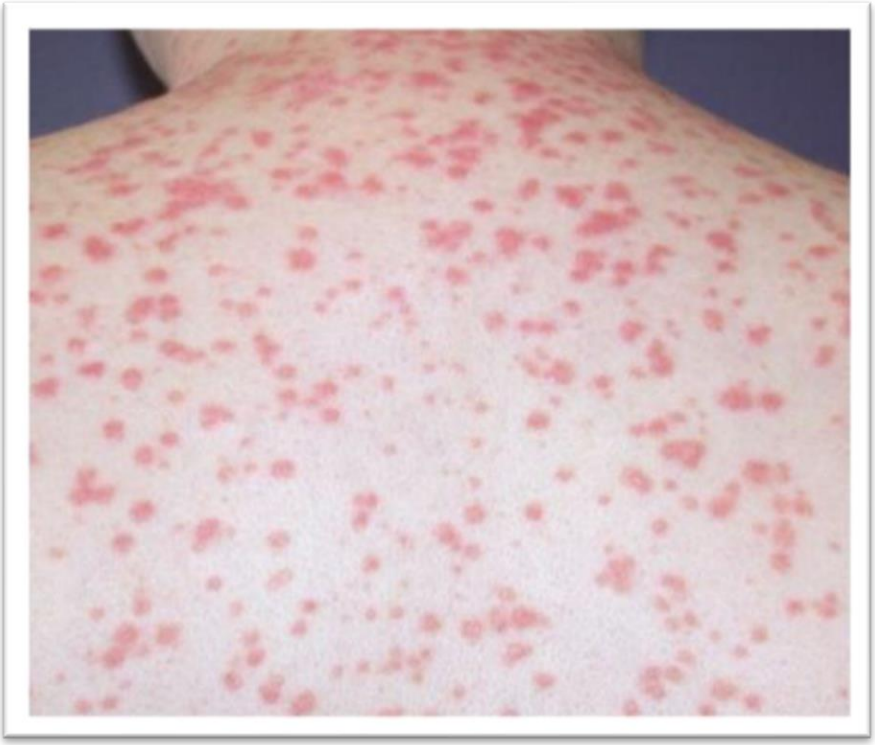
b. herpes zoster

c. erythema ab igne

d. old thoracotomy scar

e. fixed drug eruption

A picture with rash on the back and legs. The patient had sore throat 3 weeks ago. Now, he feels well but the rash persists. What to do about the rash?



A. **No treatment**.

B. Topical corticosteroid

C. Topical antibiotic

D. oral steroids

Likely a case of **Pityriasis rosea** or **Guttate psoriasis**.

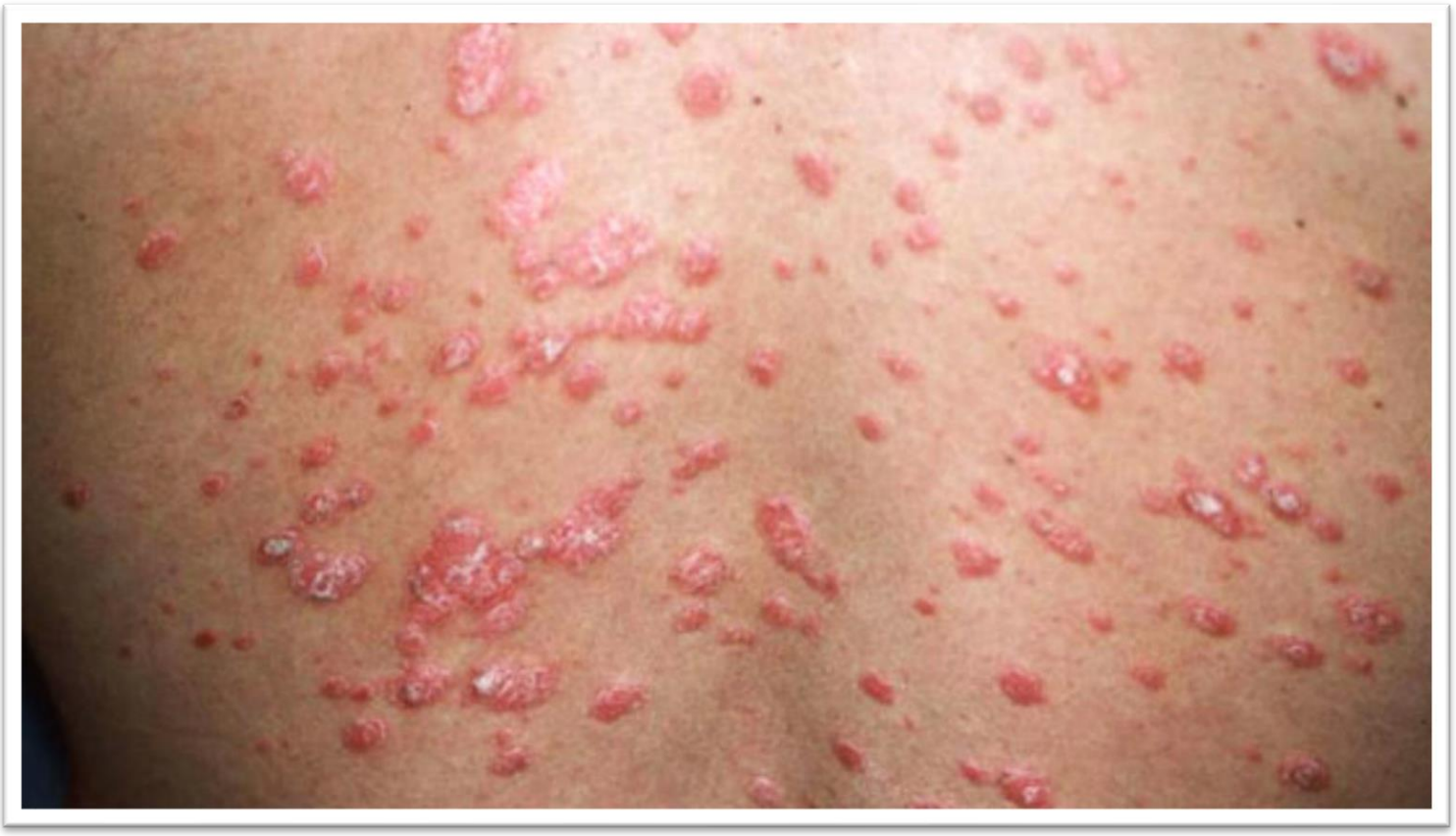
Both cases can occur **after sore throat (URTI)**.

Both cases **resolve spontaneously**.

Important Note:

If (**No treatment**) is not in the options, pick (**topical steroids**) as it is one of the treatment lines of psoriasis (Emollients, Topical steroids, Vitamin D analogues, tar preparations, if not responsive → Phototherapy).

	Guttate psoriasis	Pityriasis rosea
Prodrome	Classically preceded by a streptococcal sore throat 2-4 weeks	Many patients report recent respiratory tract infections but this is not common in questions
Appearance	'Tear drop', scaly papules on the trunk and limbs	Herald patch followed 1-2 weeks later by multiple erythematous, slightly raised oval lesions with a fine scale confined to the outer aspects of the lesions. May follow a characteristic distribution with the longitudinal diameters of the oval lesions running parallel to the line of Langer. This may produce a 'fir-tree' appearance
Treatment / natural history	Most cases resolve spontaneously within 2-3 months Topical agents as per psoriasis UVB phototherapy	Self-limiting, resolves after around 6 weeks



Guttate psoriasis with Hx of sore throat 2-4 weeks ago → give **topical steroids**.

A man who had cellulitis originating from ankle and spreading. Culture revealed MRSA resistant staph aureus. What is the initial treatment?

a. Flucloxacillin

b. piperazine and tazobactam

c. **vancomycin**

d. meropenem

e. amoxicillin

What is the drug of choice in treating MRSA?

√ **MRSA** (**M**ethicillin-**R**esistant **S**taphylococcus **A**ureus)

√ **Vancomycin** continues to be the drug of choice for treating most MRSA infections caused by multi-drug resistant strains.

√ Clindamycin, co-trimoxazole, fluoroquinolones or minocycline may be useful when patients do not have life-threatening infections caused by strains susceptible to these agents.

A 34-year-old woman presents with itchy rash. She is a taxi driver and requests medication that will not affect her alertness. She has an urticaria like rash. What is the most appropriate medication?

A. **Cetirizine tablets**

B. Chlorpheniramine tablets

C. Hydroxyzine tablets

D. Hydrocortisone tablet

E. Prednisolone Tablet

She requires **NON-SEDATING** **anti-histamine** such as Cetirizine, Loratadine.

Note, **Chlorpheniramine** is **Sedating** anti-histamine.

Malignant melanoma excised. Which feature shows a bad prognosis on histopathological examination?

a) Diameter > 6mm

b) Varying colour

c) **Depth of invasion**

Diameter > 6 and Varying colour are **suspicious features** of benign Moles to be Malignant melanoma.

Here, it is **already malignant melanoma**. **Depth of invasion** is important for prognosis.

Lipoma

√ Lipomas are benign soft-tissue masses composed of fatty tissues (Adipocytes) enclosed by a fibrous capsule.

√ They are soft, rubbery in consistency, mobile, painless, grow very slowly.

√ Malignant transformation to liposarcoma is very rare.

√ Most commonly seen in middle-aged adults (30-45 YO).

◘ If a patient presents with **typical lipomas** that are **not growing** and **not interfering with life** → **Reassure**.

◘ If there are **doubts that it is Liposarcoma** (e.g. **Size > 5 cm**, **↑ in size**, **painful**, **deep anatomical location**) → **perform Ultrasound.**

◘ If the result of US is suspicious → **refer for MRI ± Surgical removal.**

Examples:

(1) A 38 YO man presents with 2-year history of soft swelling over the right scapula. He notices **it has slowly grown in size** over the past 6 months. O/E: Painless, non-tender, 4 cm lump over the right scapula, it is not fixed to the underlying structures, there is no erythema nor tenderness.

◙ The Likely Dx → **Lipoma**.

◙ The most appropriate Ix → **Ultrasound**.

(2) A 40 YO woman presents with a 1-year history of soft tissue swelling over the right scapula. She claims that it **has not grown in size**. O/E: the swelling is **Painless**, non-tender, 4 cm lump over the right scapula, it is not fixed to the underlying structures, there is no erythema nor tenderness.

◙ The Likely Dx → **Lipoma**.

◙ The management → **Reassure**

Quick Side Notes

◙ Eruption of itchy rash after URTI, or after stress (e.g., playing football) exercise-induced urticaria, or after taking aspirin or opiates, or soon after insect bite → Think **urticaria** → Give oral antihistamine (e.g., Cetirizine, Loratadine, Chlorpheniramine -sedating-). The rash is described as wheals.

◙ **Eczema** is different from urticaria. Eczema usually on the flexures (creases) of children or face of infants. There is often a Hx of other atopy (e.g., Asthma, Hay fever). It is treated with emollients (first line) and if not

useful, add Topical steroids e.g., topical hydrocortisone. Eczema can also flare up after URTI and it is also itchy.

◙ Rash eruption after penicillin (Amoxicillin) or Streptococcal sore throat (URTI) or Mycoplasma pneumonia that begins on the back of hands, feet and then spread → Think **erythema multiforme**.

◙ **Molluscum contagiosum** (Viral, pink or white dome-shaped papules if squeezed will produce cheesy or white material) is seen in children. It can also present in Adults with AIDS (low immunity). It is very contagious but resolve spontaneously.

◙ **Impetigo** (Bacterial, golden crusts, usually in children, painful). It is contagious. As it is bacterial, it needs hydrogen peroxide 1% cream as first line Rx or Fusidic Acid (2nd line). If extensive or bullous, give flucloxacillin.

Hx of camping, walking in jungles or parks:

√ itchy rash at the same day → think of insect bite (**urticaria**)

→ give oral antihistamines.

√ annular rash 3-30 days later → think **Lyme disease**

→ give oral doxycycline.

√ 2 Potent topical steroids to remember:

Mometasone furoate 0.1%

Betamethasone Valerate 0.1%

√ When to be used?

(Potent topical steroids used for **severe eczema** that causes **bleeding, excoriations, severe itching that prevents sleeping** and not responding to emollients and over the counter hydrocortisone).

◙ In cases of **mild eczema**, after using topical emollients, we add a **mild** topical steroid such as **Hydrocortisone acetate** (either 0.5%, 1% or 2.5%).

Note that hydrocortisone butyrate is a POTENT steroid.

Here is the order of the topical steroids arranged from the least potent to the most potent:

• Hydrocortisone Acetate (either 0.5%, 1% or 2.5%) (**Mild**) →

• Betamethasone 0.025% ▌Clobets**on**e (**Moderate**) →

• Betamethasone 0.1% ▌Hydrocortisone Butyrate ▌Mometasone (**Potent**) →

• Clobetas**ol** 0.05% (**Very Potent**). (Usually not prescribed unit referred to dermatology).

◙ So, if a patient with **severe eczema** that disturbs his sleep and causes excoriations, bleeding, intense itching

→ **Potent** steroids eg, (betamethasone valerate **0.1%**). (0.1% not 0.025%).

The most important prognostic indicator for malignant melanoma is:

→ **Vertical growth** (**the depth of the tumour**).

Severe itching, linear eruptions, between web-spaces, worse after shower and at night, common in nursing home, may be found within the family members

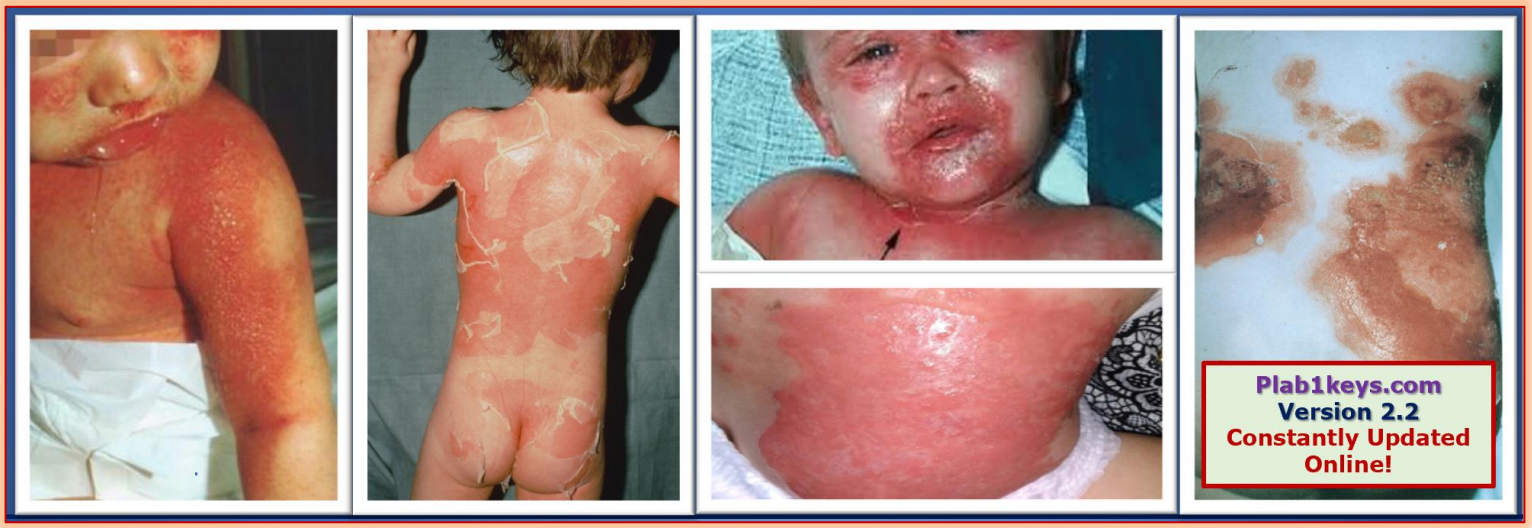
- Think → **Scabies**
- The pathogen → **Sarcoptes Scabiei**
- 1st line Rx → **Permethrin cream 5%**

(It should be applied to the entire body except the head. Rx is repeated after 7 days).

- 2nd line Rx → Malathion 0.5%
- All family members and people with physical contact should be treated even if asymptomatic.

Staphylococcal Scalded Skin Syndrome (SSSS)

= Ritter's disease



◙ What is staphylococcal scalded skin syndrome?

Staphylococcal scalded skin syndrome (SSSS) is an illness characterised by red blistering skin that looks like a burn or scald, hence its name staphylococcal scalded skin syndrome. SSSS is caused by the release of two exotoxins (epidermolytic toxins A and B) from toxigenic strains of the bacteria Staphylococcus aureus.

SSSS has also been called Ritter disease or Lyell disease when it appears in newborns or young infants.

◙ Who is at risk of staphylococcal scalded skin syndrome?

SSSS occurs mostly in children younger than 5 years, particularly neonates (newborn babies). Lifelong protective antibodies against staphylococcal exotoxins are usually acquired during childhood which makes SSSS much less common in older children and adults. Lack of specific immunity to the toxins and an immature renal clearance system (toxins are primarily cleared from the body through the kidneys) make neonates the most at risk.

Immunocompromised individuals and individuals with renal failure, regardless of age, may also be at risk of SSSS.

◙ What are the signs and symptoms of staphylococcal scalded skin syndrome?

SSSS usually starts with **fever**, **irritability** and **widespread redness of the skin**. Within 24-48 hours fluid-filled **blisters** form. These **rupture easily**, leaving an area that looks like a burn.

◙ Characteristics of the SSSS rash include:

Tissue paper-like wrinkling of the skin is followed by the appearance of large fluid-filled blisters (bullae) in the armpits, groin and body orifices such as the nose and ears.

Rash spreads to other parts of the body including the arms, legs and trunk. In newborns, lesions are often found in the diaper area or around the umbilical cord.

Top layer of skin begins peeling off in sheets, leaving exposed a moist, red and tender area. **Nikolsky sign is positive** (i.e. **gentle strokes result in exfoliation**)

Other symptoms may include tender and painful areas around the infection site, weakness, and dehydration.

◙ How is staphylococcal scalded skin syndrome fever diagnosed?

Diagnosis of SSSS depends on:

√ History and physical examination

√ Tzanck smear

√ Skin biopsy, which shows intraepidermal cleavage at the granular layer

√ Bacterial culture from skin, blood, urine or umbilical cord sample (in a newborn baby)

◙ What is the treatment of staphylococcal scalded skin syndrome?

Treatment of SSSS usually requires **hospitalisation**, as intravenous antibiotics are generally necessary to eradicate the staphylococcal infection. A penicillinase-resistant, anti-staphylococcal antibiotic such as **flucloxacillin** is used. Other antibiotics include nafcillin, oxacillin, cephalosporin and clindamycin. **Vancomycin** is used in infections suspected with methicillin resistance (MRSA). Depending on response to treatment, oral antibiotics can be substituted within several days. The patient may be discharged from hospital to continue treatment at home.

Corticosteroids slow down healing and hence are not given to patients with SSSS.

◙ Other supportive treatments for SSSS include:

Paracetamol when necessary for fever and pain.

Monitoring and maintaining **fluid and electrolyte** intake.

Skin care (the skin is often very fragile). Petroleum jelly should be applied to keep the skin moisturised.

Newborn babies affected by SSSS are usually kept in incubators.

Although the outward signs of SSSS look bad, children generally recover well and healing is usually complete within 5–7 days of starting treatment.

Staphylococcal Scalded Skin Syndrome (SSSS)

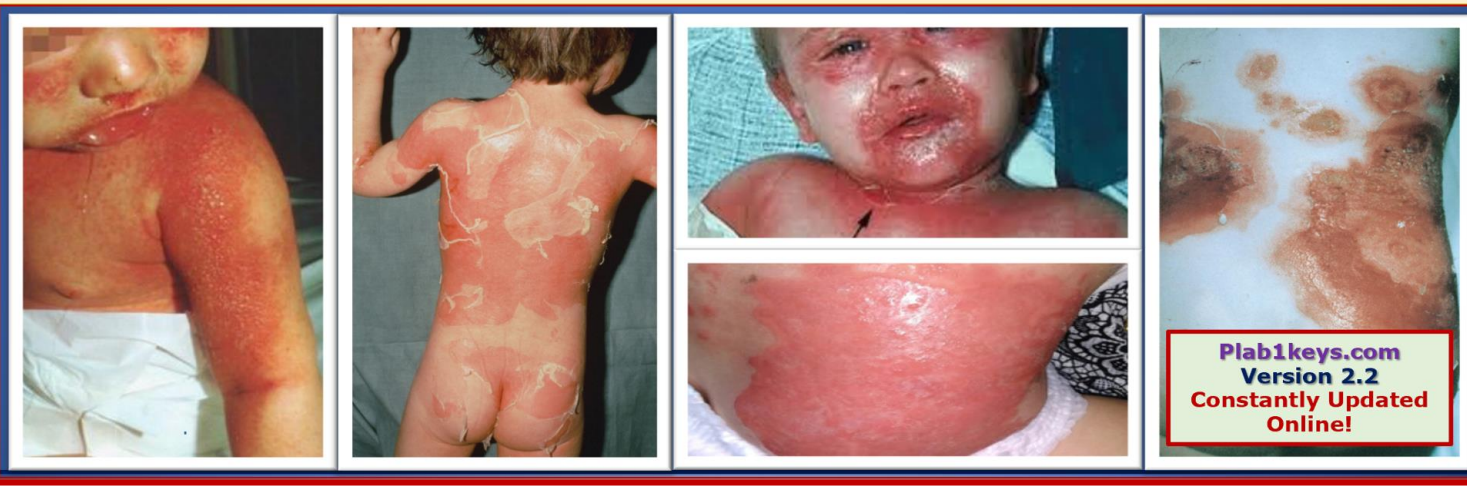
= Ritter's disease

- **Signs and Symptoms:**

SSSS usually starts with **fever**, **irritability** and **widespread redness of the skin**. Within 24-48 hours fluid-filled **blisters** form. These **rupture easily**, leaving an area that looks like a burn.

Top layer of skin begins peeling off in sheets, leaving exposed a moist, red and tender area. **Nikolsky sign is positive** (i.e. **gentle strokes result in exfoliation**).

- **Management:** **Hospitalisation – Fluid and electrolyte balance – Nutrition – Analgesics – Antibiotics (Flucloxacillin), if MRSA → Vancomycin.**



Bullous pemphigoid

◙ Bullous pemphigoid is an autoimmune condition causing sub-epidermal blistering of the skin. This is secondary to the development of antibodies against hemidesmosomal proteins BP180 and BP230

◙ Bullous pemphigoid is more common in **elderly** patients (>60 YO). Features include

- itchy, tense **blisters** typically around flexures
- the blisters usually heal without scarring
- mouth is usually spared.

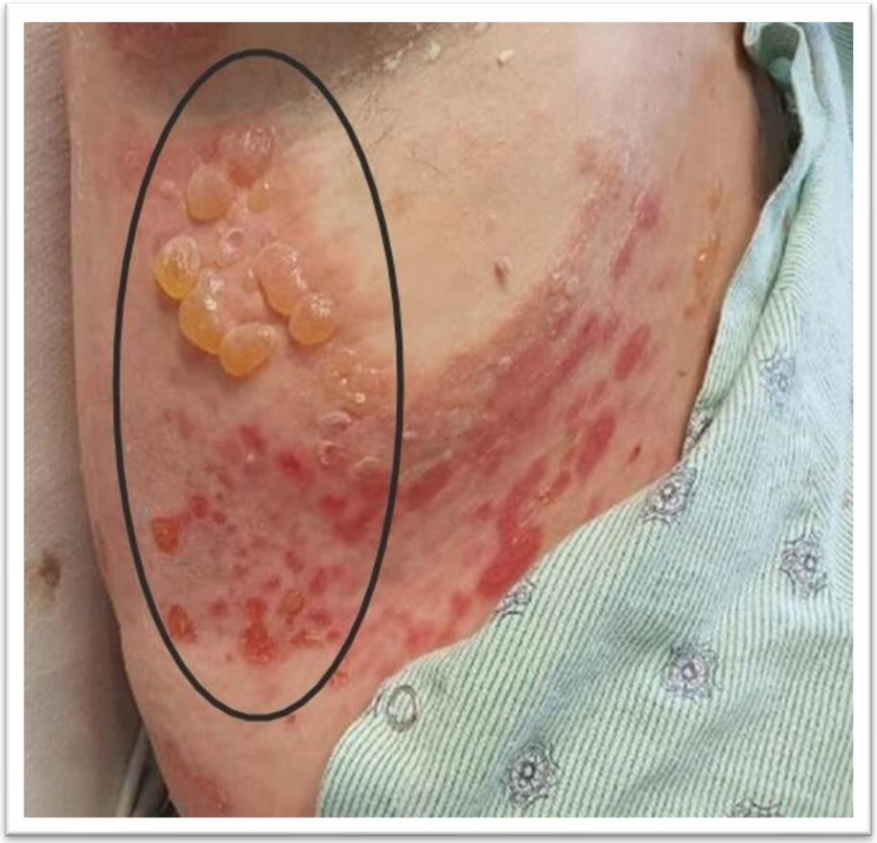
◙ Skin biopsy

- immunofluorescence shows IgG and C3 at the dermoepidermal junction

◙ Management

- referral to dermatologist for biopsy and confirmation of diagnosis
- **oral corticosteroids** are the mainstay of treatment
- topical corticosteroids, immunosuppressants and antibiotics are also used

√ Note: 2ry infection may occur → fever, sepsis → delirium

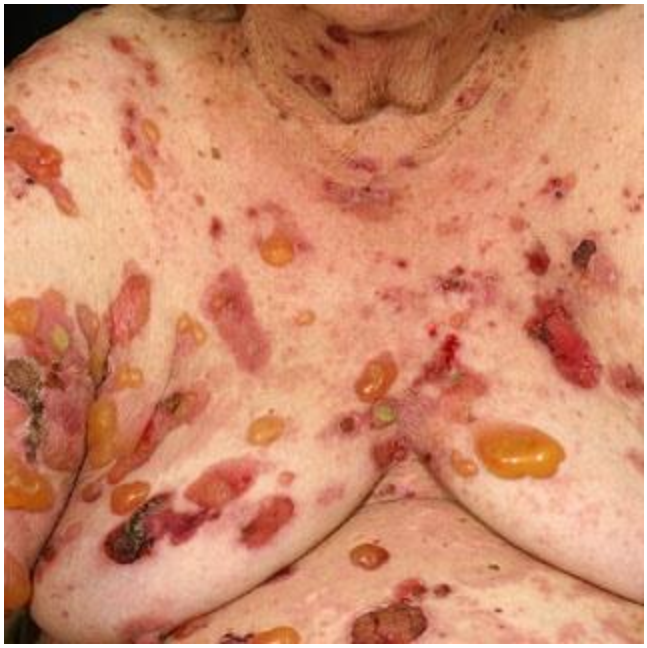


Bullous pemphigoid

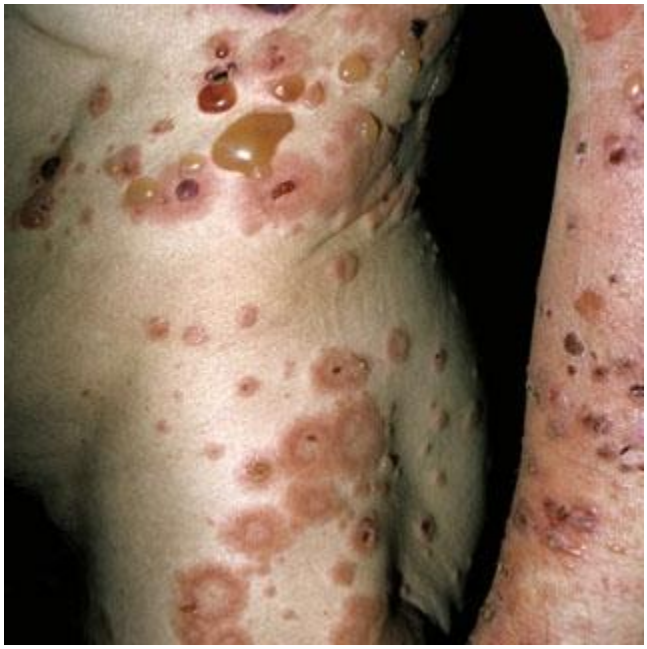
Blisters include vesicles and bullae:

Bullae → > 0.5 cm in diameter.

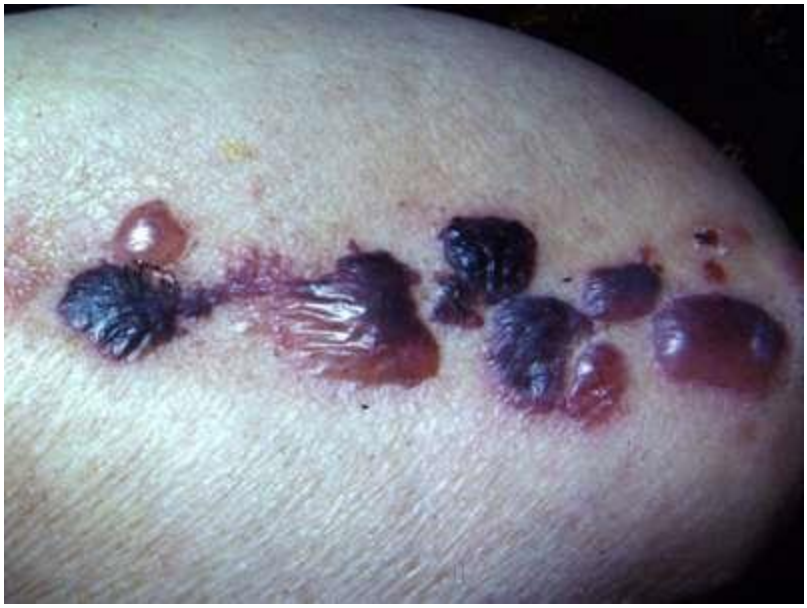
Vesicles → < 0.5 cm in diameter.



Bullous pemphigoid



Bullous pemphigoid



Bullous pemphigoid

Eczema herpeticum

◙ Eczema herpeticum describes a severe infection of the skin by herpes simplex virus 1 or 2 (HSV1 or HSV2). Hx of previous atopic dermatitis.

◙ It is more commonly seen in **children with atopic eczema** and often presents as a **rapidly progressing painful and itchy rash**.

◙ On examination, monomorphic **punched-out erosions and ulcers** (circular, depressed, ulcerated lesions) usually 1–3 mm in diameter are typically seen. The lesions can also be oozing and crusting (oozing clear fluids, crusting in yellowish colour).

◙ As eczema herpeticum is often on the face or around the mouth, however; it can occur at flexor sites eg, elbows and knees such as in those with Hx of atopic dermatitis.

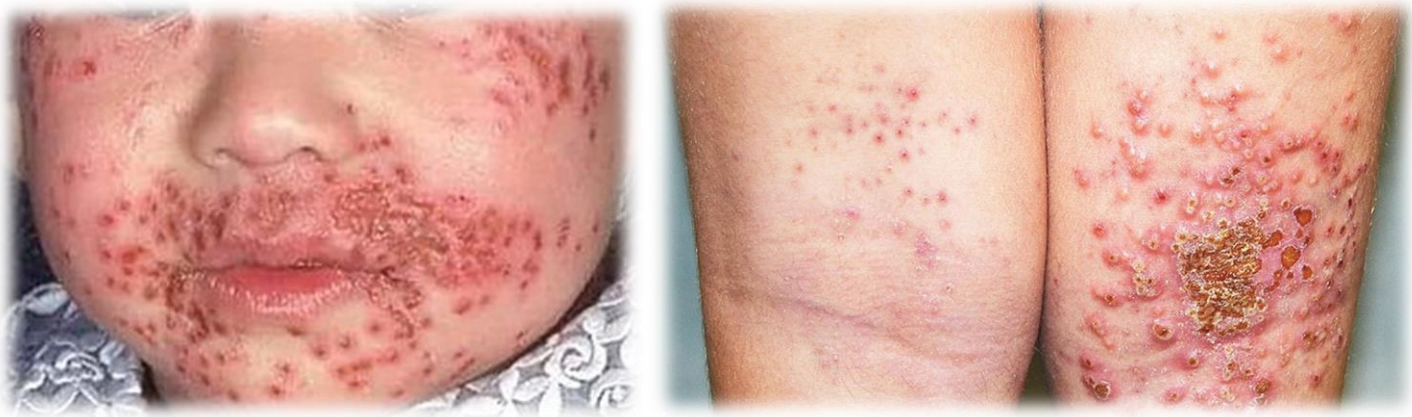
It is often confused with **impetigo** (a common skin infection caused by bacteria). The difference is **that a child with eczema herpeticum will often be generally unwell, with a fever**, whereas with impetigo they don't usually feel ill. However, fever is not always present.

◙ Dx → Swabs for PCR.

◙ Rx → **Antivirals** (**Oral acyclovir**. If severe → IV Acyclovir)

In severe cases, it is potentially life-threatening, so children should be admitted for IV aciclovir.

If there is a secondary bacterial infection (fever, systemically unwell) →, give antibiotics as well.



Eczema herpeticum

Example:

A 7-year-old boy with a background history of atopic dermatitis on emollients presents to the GP complaining of the following: one-week history of a rapidly worsening painful rash behind his knee. On examination, multiple vesicles and pustules on an eczematous skin. He is afebrile (no fever) and appears systemically well. What is the most appropriate management?

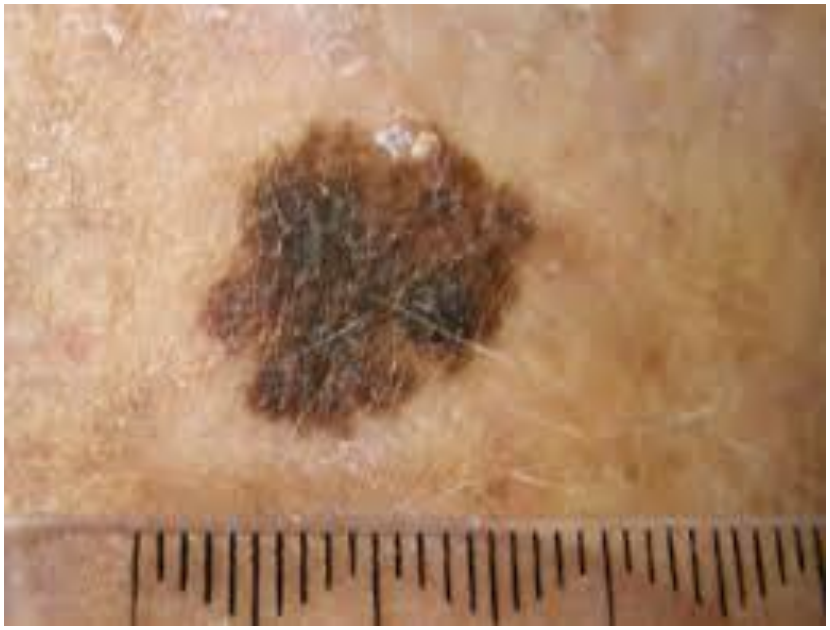
→ **Oral Aciclovir (Antiviral)**.

√ The presence of vesicles and pustules on top of eczema indicates (**Eczema Herpeticum**) which is a viral infection that requires **antiviral** (eg, **aciclovir**).

√ Since there is no fever, and he is systemically well → likely not a secondary bacterial infection → no antibiotics (eg, flucloxacillin) needed.

◙ Ulcer, with central depression, and rolled edges, Hx of radiotherapy,

Think → **Basal Cell Carcinoma** (even if not on the face).



Superficial spreading melanoma

→ **Refer "urgently" to a dermatology clinic**.

Paronychia

◙ What is paronychia?

Paronychia is inflammation of the skin around a finger or toenail. It can be acute (< 6 weeks) or chronic (persisting > 6 weeks).

Paronychia is also called whitlow. It may be associated with felon (infection of the pulp of the fingertip).

There may or may not be a history of trauma a few days before the infection.

◙ What causes paronychia?

Acute paronychia is usually due to bacterial infection with *Staphylococcus aureus*.

◙ Acute paronychia clinical features:

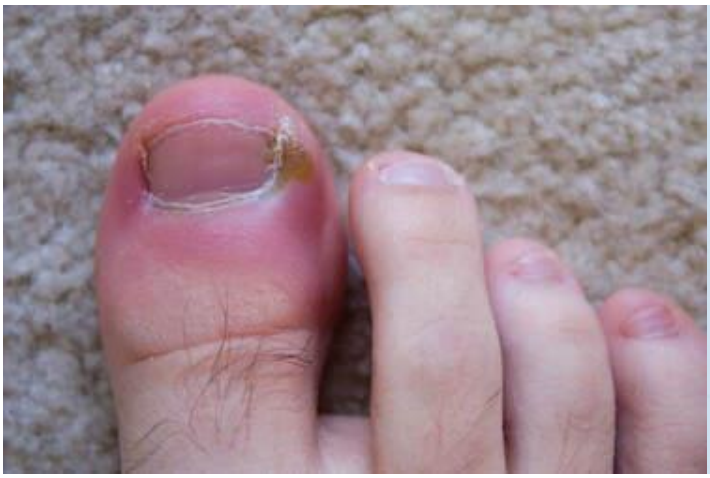
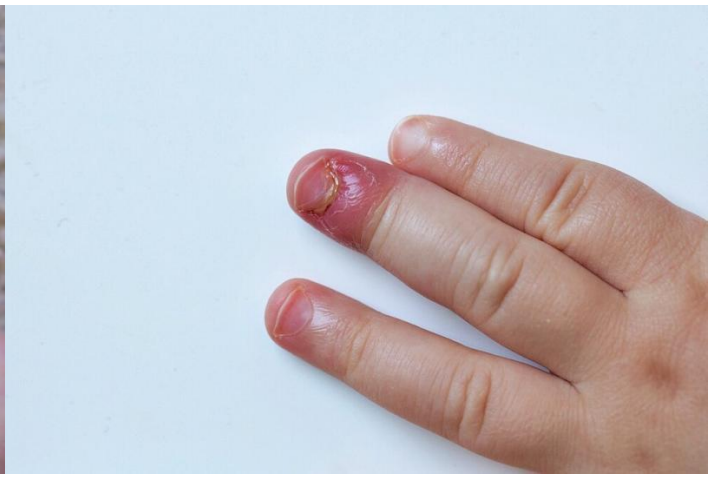
Acute paronychia develops rapidly over a few hours, and usually affects a single nail fold. Symptoms are pain, redness and swelling.

◙ What is the treatment for paronychia?

• Minor infection → Topical fusidic acid.

• Severe infection → Oral Flucloxacillin or Clarithromycin (both are considered first line). "*important*"

• If abscess → Surgical drainage followed by packing with gauze.

Paronychia

Give → Oral flucloxacillin or clarithromycin.

Here are 3 scenarios on different dermatology topics:

(Scenario 1)

A 6 YO boy has a golden-brown crust near the right periorbital area. The vesicle had ruptured 2 days ago. He has mild itching and no fever. His mother has been applying a topical antiseptic cream on the lesion over the past days. What is the most appropriate medication to use?

This is impetigo.

He has been using a topical antiseptic "hydrogen peroxide 1%" "**first line**".

Now, the **second line** is → "**antibiotics**": either **fusidic acid** or **mupirocin**.

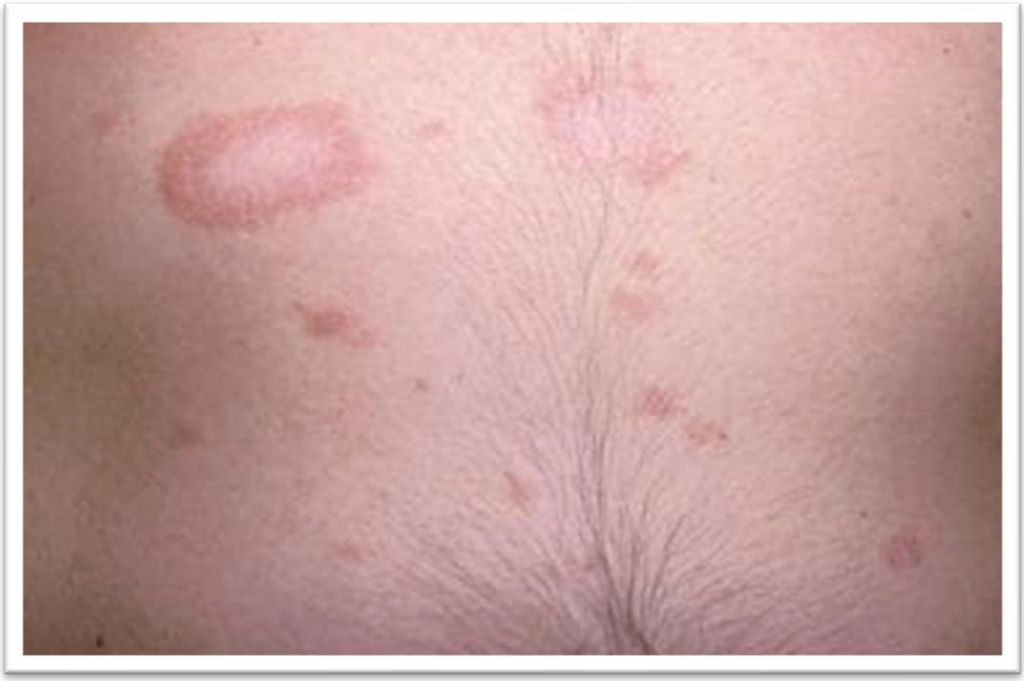
Remember, oral flucloxacillin is used in a case of extensive impetigo.

(Scenario 2)

A patient with acne vulgaris was given a medication and then she developed dry eyes, mouth, nose and frequent nose bleeds. What is the medication that was given and caused these side effects? → **ORAL isotretinoin**

(Scenario 3)

A 30 YO woman developed papular rash around chest, back and abdomen. A few days before the rash, she had fever and mild headache. The rash started on her back as a single large rash (seen in the picture). Around 7 days later, she developed oval smaller patches on chest, back and abdomen.



The likely Dx → **Pityriasis rosea**.

(The biggest shown lesion is called Herald patch; a classic for P.Rosea).

Herpes Simplex Labialis (= HSV1) = (Oral herpes) (= Cold sores).

• Transmission → Diract contact with saliva (eg, kissing).

• Painful vesicles on the lips ± around the mouth (but not inside the mouth).

• Before these vesicles appear, there are usually prodromal symptoms mainly tingling and burning over the perioral area.

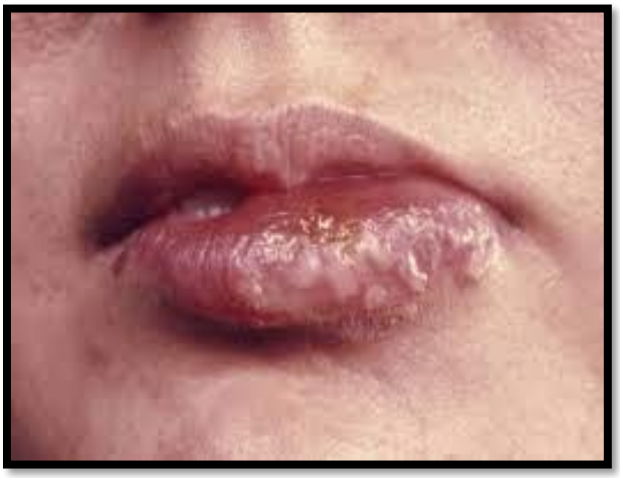
◙ Rx of Herpes Labialis (Important):

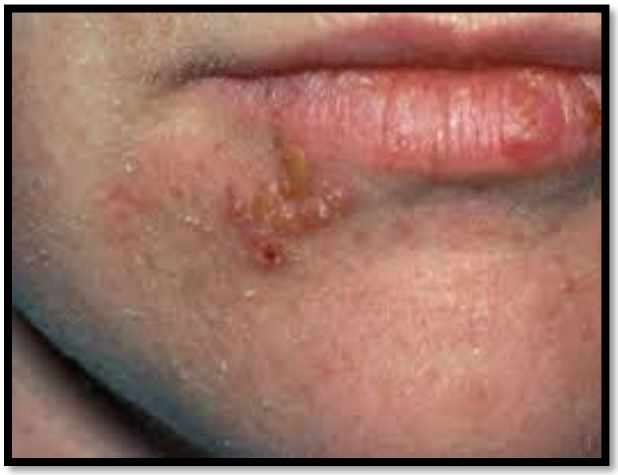
√ Firstly "mainly the answer" → pain relief (eg, ibuprofen, paracetamol).

"The vesicles mainly collapse into ulcers, then crust over in a few days".

√ If **Persistent** and **Severe** / or **Primary "first time"** / or in an **Immunocompromised patient** (eg, DM, Prolonged use of steroids, HIV, Smokers, Chemotherapy)

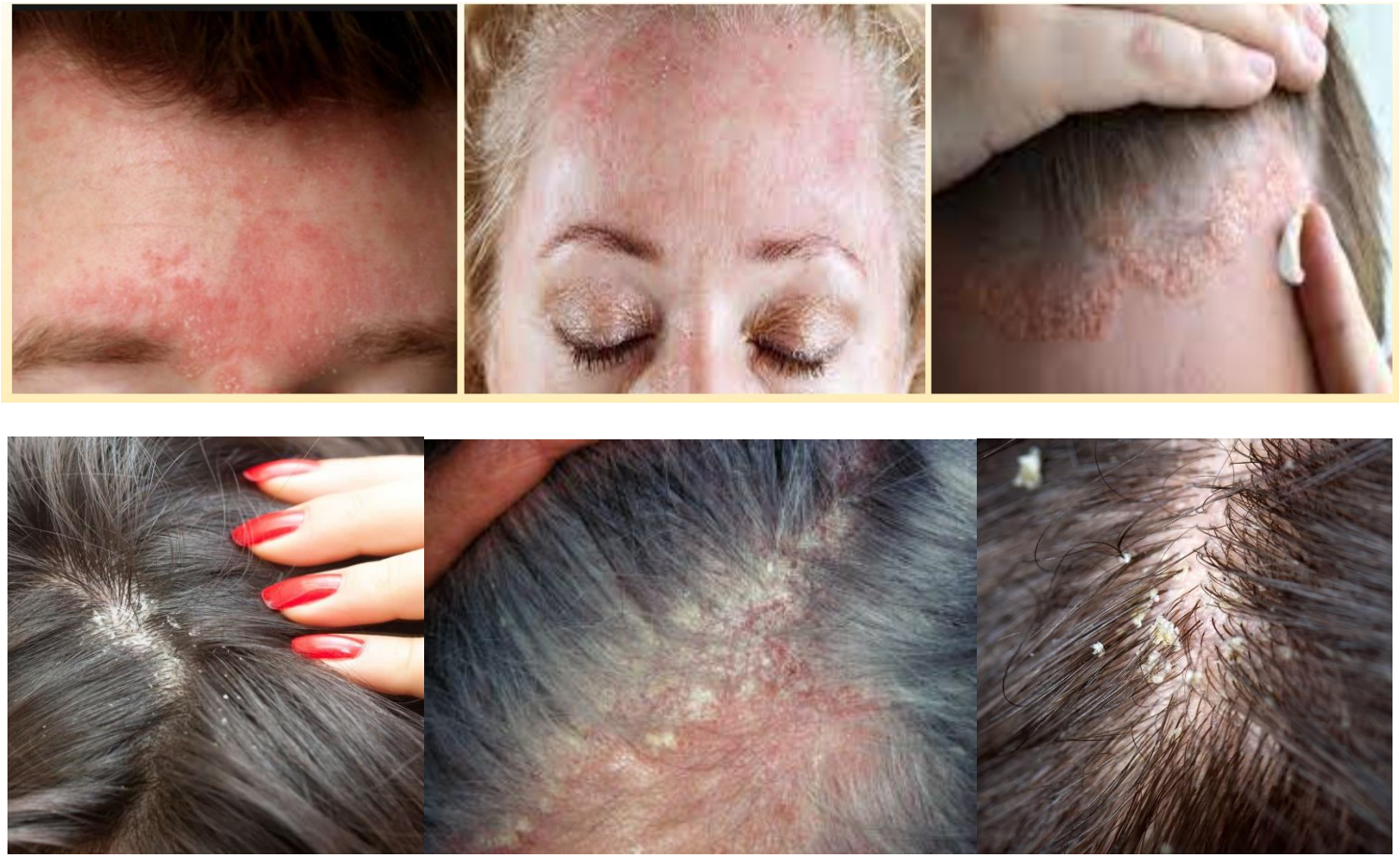
→ give oral antivirals (eg, oral aciclovir). Caution to the question!





Oral herpes (herpes labialis) → give pain relief first.

Spot Dx:



Dx → Seborrheic Dermatitis.

- Common chronic skin condition.
- Affects sebaceous glands.
- Sites: **Scalp**, **forehead**, eyebrows, nasolabial folds, chest.
- Presents as: Scaling rash (inflamed yellow greasy scales) ± Mild itching.
- Can present as dandruff when on scalp.

◙ Management of seborrheic dermatitis:

**** In children** → depends on severity

√ mild-moderate → baby shampoo and baby oils.

√ severe → mild topical steroids e.g., 1% hydrocortisone.

Seborrheic dermatitis in children tends to resolve spontaneously by around 8 months of age.

**** In Adults**

√ 1st-line: Over the counter preparations containing **zinc pyrithione** ('Head & Shoulders') and **tar** ('Neutrogena T/Gel').

√ 2nd-line Regular Antifungal medication (**ketoconazole**) + Intermittent topical steroids.

Important Summary

Eczema Management:

In addition to **emollients**, use **topical steroids** based on the severity of eczema:

• **Mild eczema** (little impact on daily activities).

→ Mild potency steroids e.g., **hydrocortisone 1%**.

• **Moderate eczema** (frequently disturb sleep, no bleeding, cracking, oozing)

→ Moderate to potent steroids e.g., **betamethasone 0.025%**.

• **Severe eczema** (Cracking, bleeding, Loss of night sleep, poor psychological function due to itching, extensive skin thickening)

→ Start with (**potent**) steroids eg, → **betamethasone (0.1%), mometasone**.

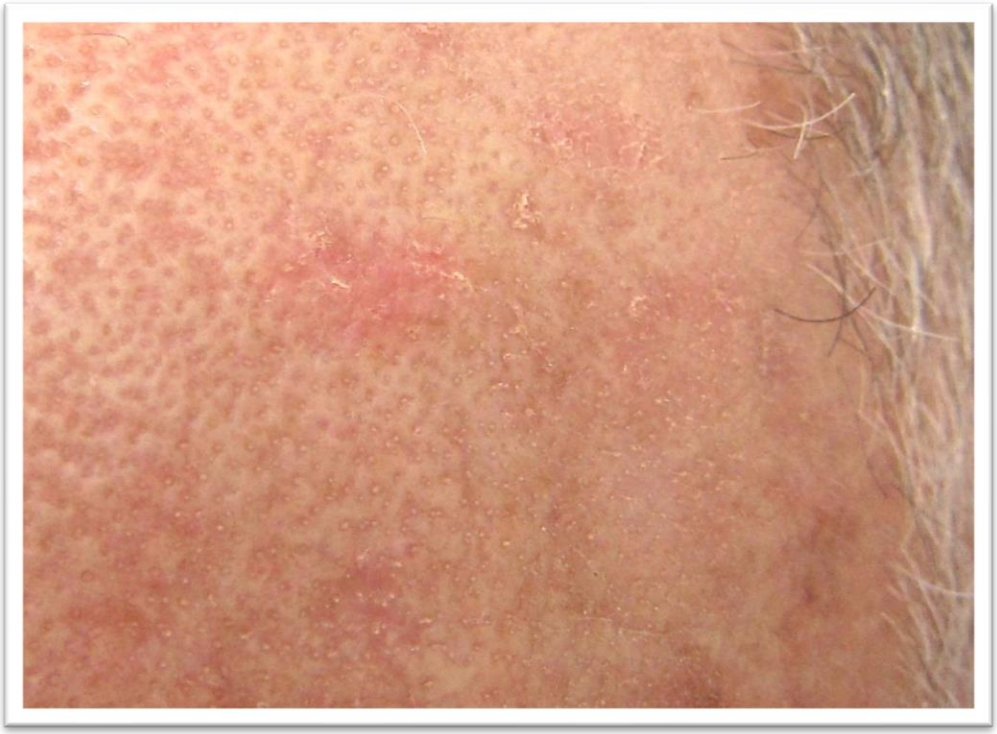
If not given in the options or failed → Very potent steroids e.g., **Clobetasol 0.05%**.

*Note that Clobetas**one** is moderately potent while clobetas**ol** is very potent.*

Clobetasol is very potent and it is more appropriate not to be prescribed until referred to dermatology. Start with a potent steroid if severe eczema.

Actinic keratosis

Actinic keratosis, or solar keratoses (AK) is a common premalignant skin lesion that develops as a consequence of **chronic sun exposure. (e.g., Gardener, Civil engineer)**



◙ **Features**

√ Small, crusty or **scaly** lesions.

√ **Rough** skin surface.

√ **Not** painful or itchy (can be slightly itchy).

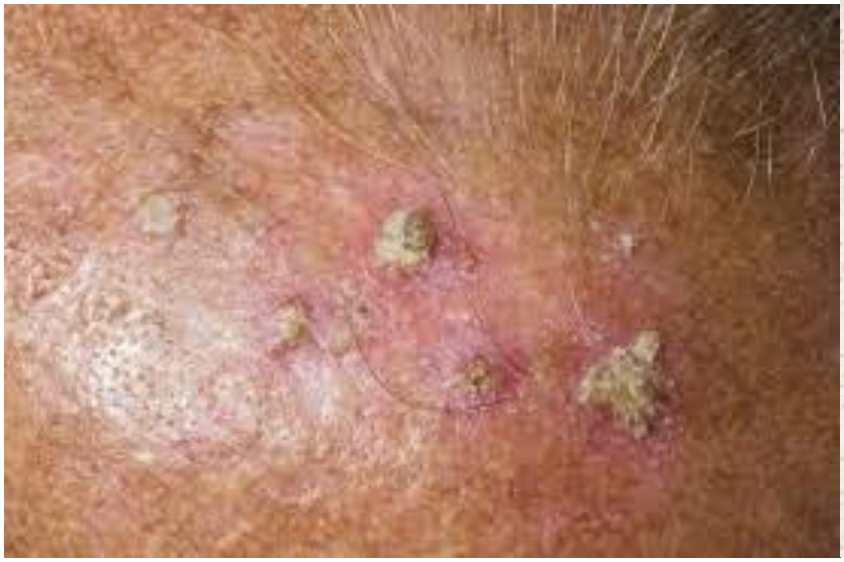
√ May be pink, red, brown or the same colour as the skin.

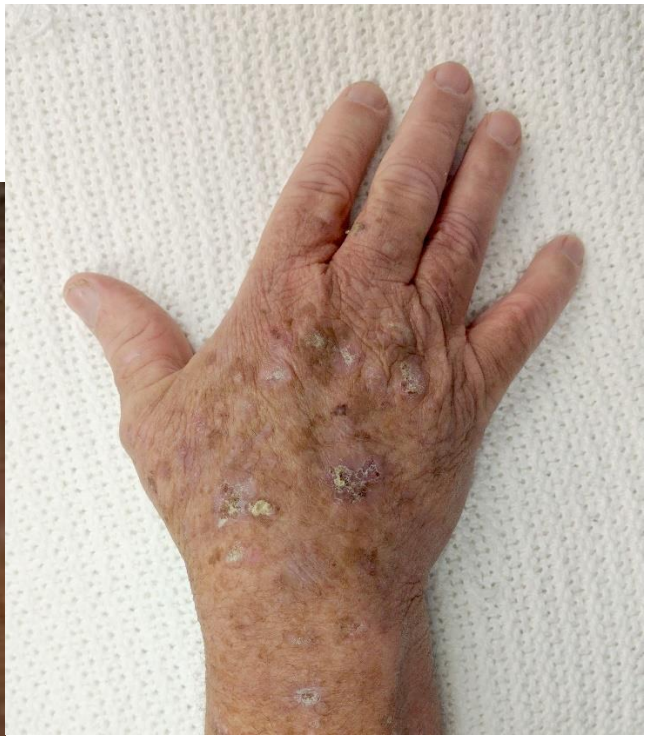
√ Typically, **on sun-exposed areas** e.g., scalp, limbs.

√ Multiple lesions may be present.

Initially, there more felt than seen (like in the above picture)

As time goes, they become more rough, visible and **hyperkeratotic** as the follows:





◙ Management options include

√ Prevention of further risk: e.g., sun avoidance, sun cream,

Advise the patient to use sunblock.

√ **Fluorouracil cream**: typically, a 2-to-3-week course. The skin will become red and inflamed - sometimes topical hydrocortisone is given following fluorouracil to help settle the inflammation.

Other Options:

√ Topical diclofenac: may be used for mild AKs. Moderate efficacy but much fewer side-effects.

√ cryotherapy.

√ curettage and cautery.

◙ Example:

A 65 YO retired **gardener** presents with 4-month duration of **small rough scally spots** that can be felts as a **rubbing sandpaper** on his forehead going up to his scalp.

Likely Dx → Actinic keratosis.

Rx → Fluorouracil.

Important Note: It is important to remember that the **rash** that appears in patients with **celiac disease** (+ve tissue transglutaminase IgA) is commonly

→ **Dermatitis herpetiformis**.

(Remember this link between **Celiac disease** and **Dermatitis herpetiformis**).

Eczema herpeticum

√ Eruption of **viral infection** -commonly **HSV**- on top of preexisting skin disease eg, history of previous eczema, atopic dermatitis.

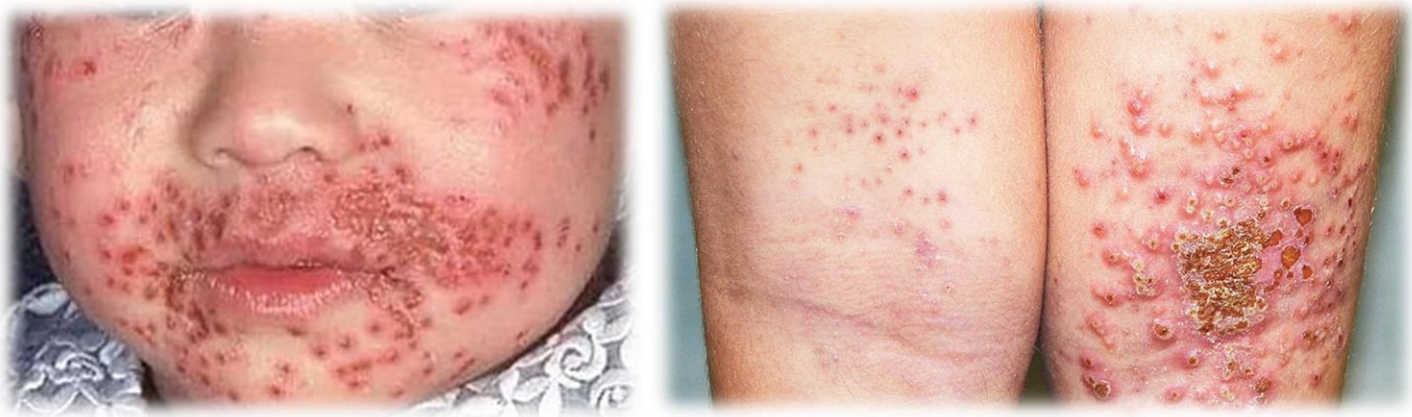
√ Mostly in children **around mouth**, however it can occur at other sites eg, **flexor surfaces such as knees and elbows**).

√ Characterized by severely itchy and painful vesicles, punched out ulcers, oozing clear fluid, yellowish crusts.

√ Dx → Swab the vesicles for PCR (antiviral studies) + for bacterial culture.

√ Rx → Antiviral (oral aciclovir, severe cases would require IV aciclovir)

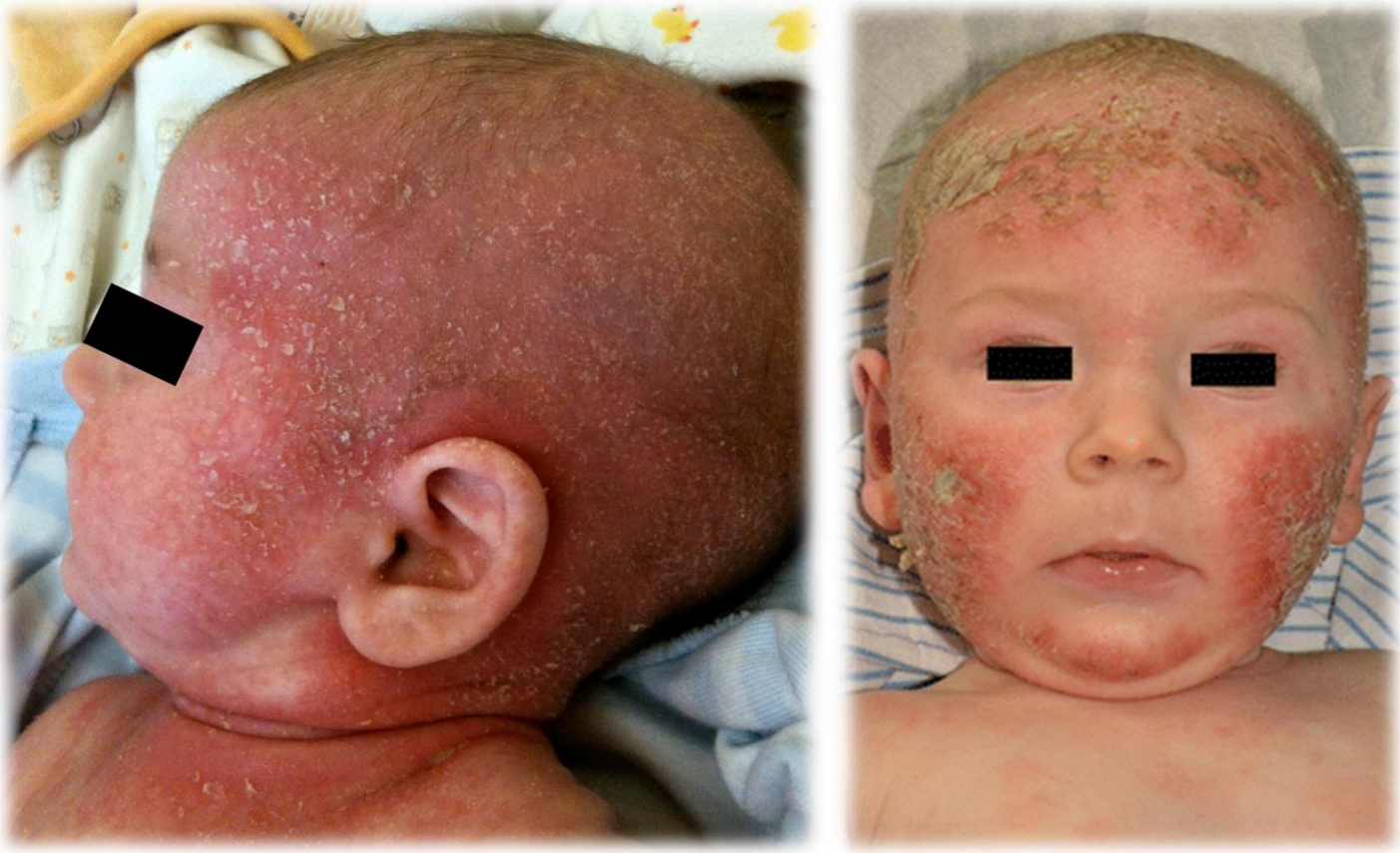
± (with possible antibiotic if 2ry infection) for Rx.



Eczema herpeticum

Atopic dermatitis (Atopic eczema)

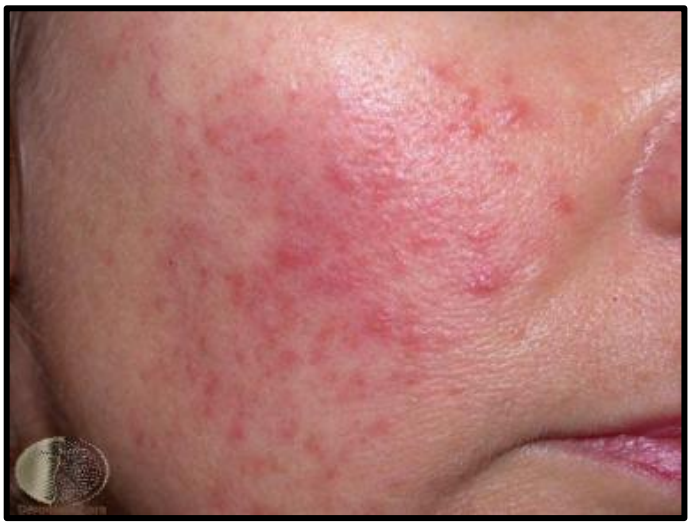
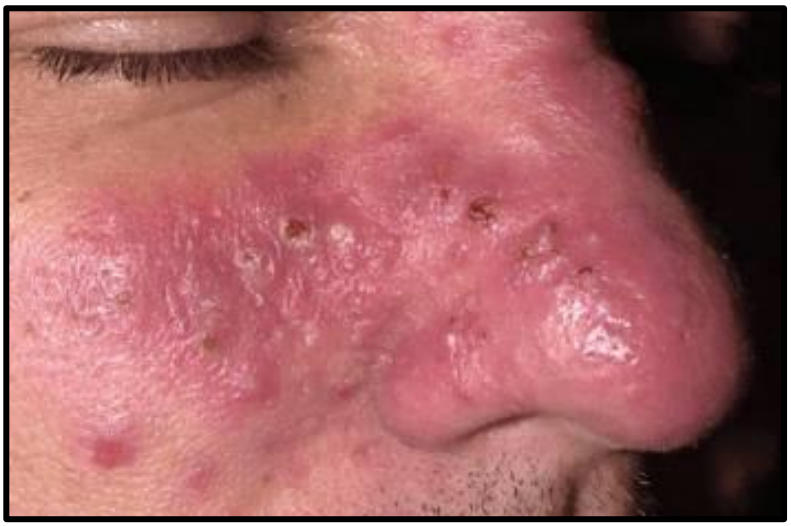
- It is the most common form of eczema.
- It occurs mostly in children (commonly < 1 year old).
- It presents with itchy, red, dry, cracked skin.
- Rx → **Emollients** ± (topical steroids, based on severity).



Atopic dermatitis or Atopic eczema in an infant

Rosacea (Acne Rosacea).

- **Redness** and **flushing** mainly on **face** for a long period that is **relapsing**.
- Aggravated by **alcohol consumption**, **sun (hot) exposure**, **spicey food**. √
- ± **Papules** and **pustules** (but no comedones).
- ± **Rhinophyma** (enlarged red nose) (in Men).

Management of Acne Rosacea (**important**)

◙ If **erythema** (redness) predominant → topical brimonidine.

◙ If **papules/ pustules** predominant:

√ First line → ivermectin. √

√ Second line → topical metronidazole.

◙ More **severe** disease is treated with the above (+) **systemic antibiotics** eg, Oxytetracycline, Tetracycline.

Flexural Psoriasis

• Pink, Scaly, plaques (with well-defined borders).

• From its name, it occurs at the **flexures** (**skin folds**). Examples:

√ Armpits (Axilla). "A common site".

√ Groin.

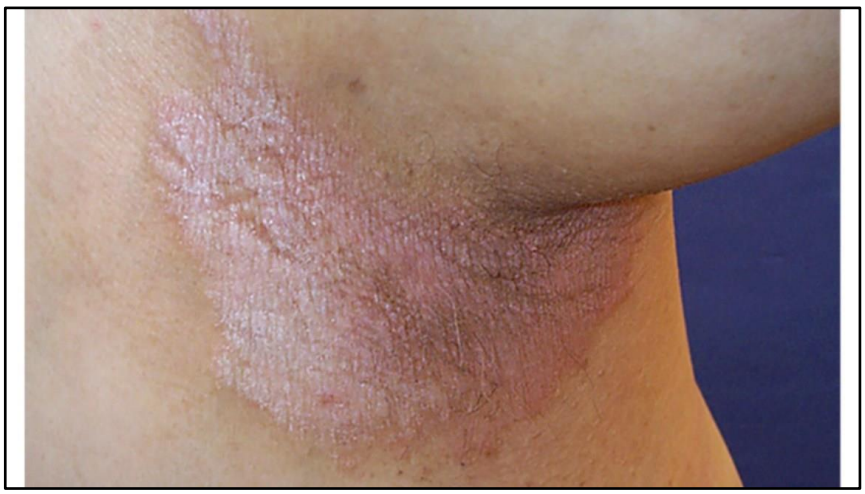
√ Breasts.

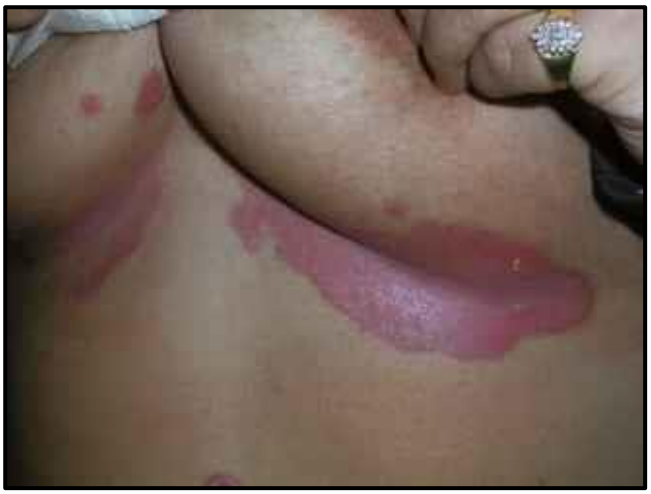
√ Around the anus.

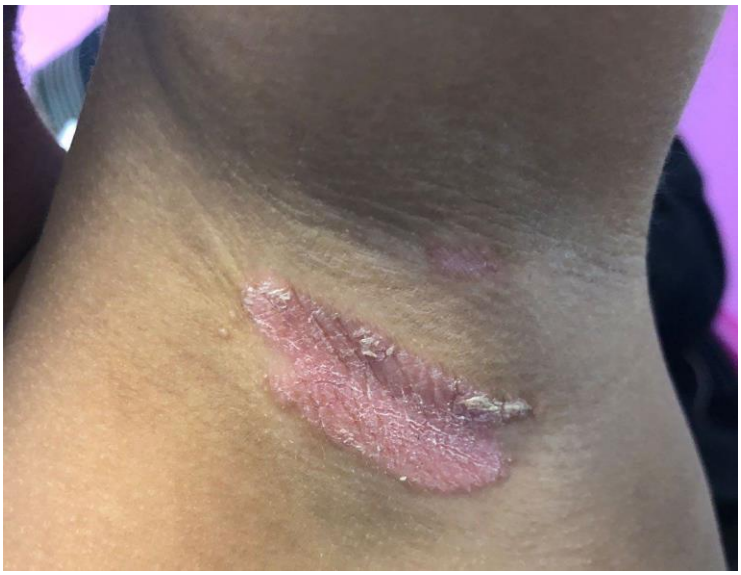
• There is a **link** between **flexural psoriasis** and **inflammatory bowel disease** especially **Crohn's disease**. "This might be given as a **hint** in the exam".

• It is important to know that (ACE inhibitors eg, ramipril) can flare up psoriasis.

• **Management Options**: Topical steroids. Vitamin D-like compounds. Topical calcineurin inhibitors. Strong topical agents. Phototherapy.







Flexural psoriasis at the armpit (axilla) and under breast folds.

Scabies

√ **Linear tracks on skin** (**Burrows**) + **Severe Pruritus** (**itching**), specially at the skin fold "flexures" of → *wrists*, *finger webs*, *elbows*, *axilla*, areola, genitalia.

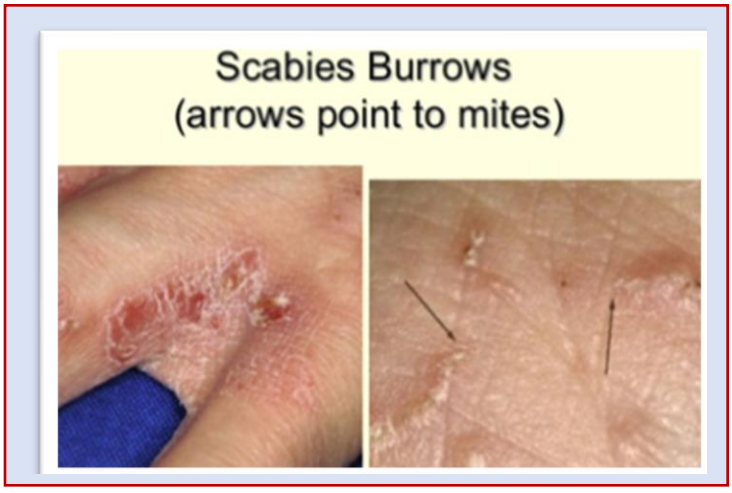
√ Another presentation: Several small erythematous papulovesicular lesions commonly found on the wrists and between the fingers.

◙ Dx → **Scabies.**

◙ Organism → **Sarcoptes Scabiei**.

(parasite → skin infestation)

◙ Mode of transmission



→ **Skin-to-skin contact**

◙ Mechanism of Pruritus → **Allergic Reaction** (Not infection)! Important √

◙ First line treatment → **Permethrin cream 5%** (not 0.5%).

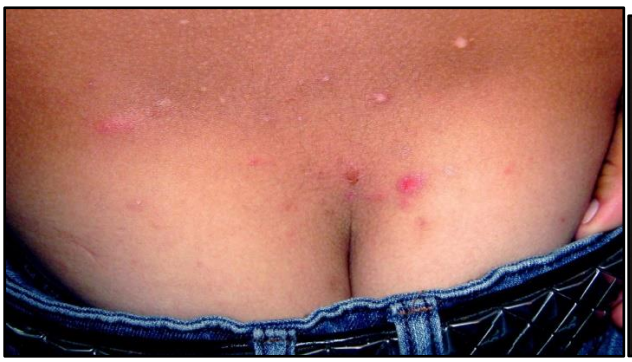
◙ Second line treatment → Malathion 0.5%.

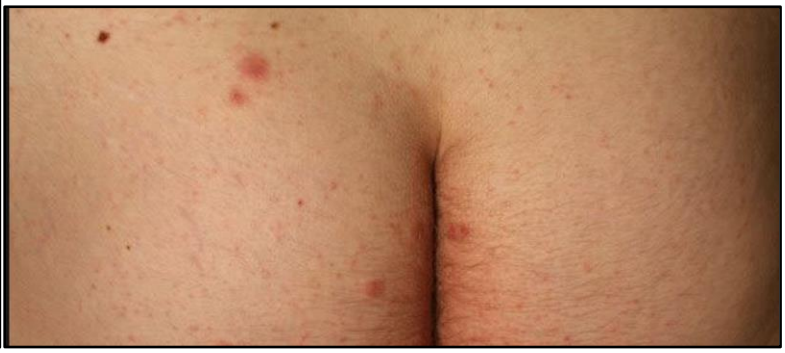
[**Note**, **all** family members & contacts should be treated with **topical permethrin** 5% even if they are asymptomatic]. Pregnancy is NOT a contraindication to permethrin.

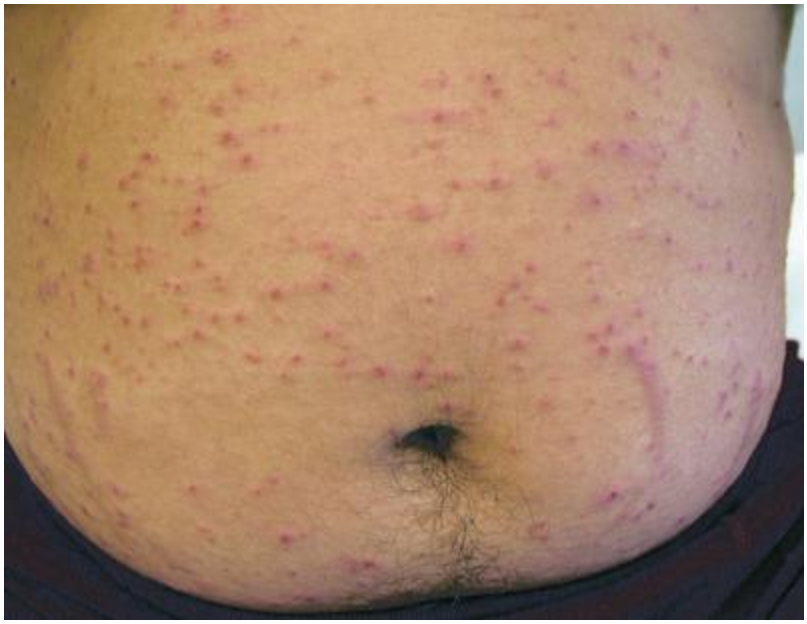
♦ Usual hint → **Nursing Home Resident** ♦

♦ Another hint → **Living in a crowded low sanitary place eg, a refugee camp.** ♦

♦ Usual hint → eg, a nurse came in contact with a scabies patient. An **elderly** in a **Nursing Home** ♦







Scabies is characterised by itchy rash on buttoks, abdomen, hands and feet. The itchiness is specially worse at night that it may cause difficulty sleeping.

Scabies has no relation to atopy, eg, eczema. √

◙ A 5-year-old child with eczema that has been worsening for month and does not get relieved by regular emollients. There is rash on his arms, legs, trunk and neck that disturbs his sleep and causes excoriations, bleeding, intense itching and skin thickening. What is the most appropriate management?

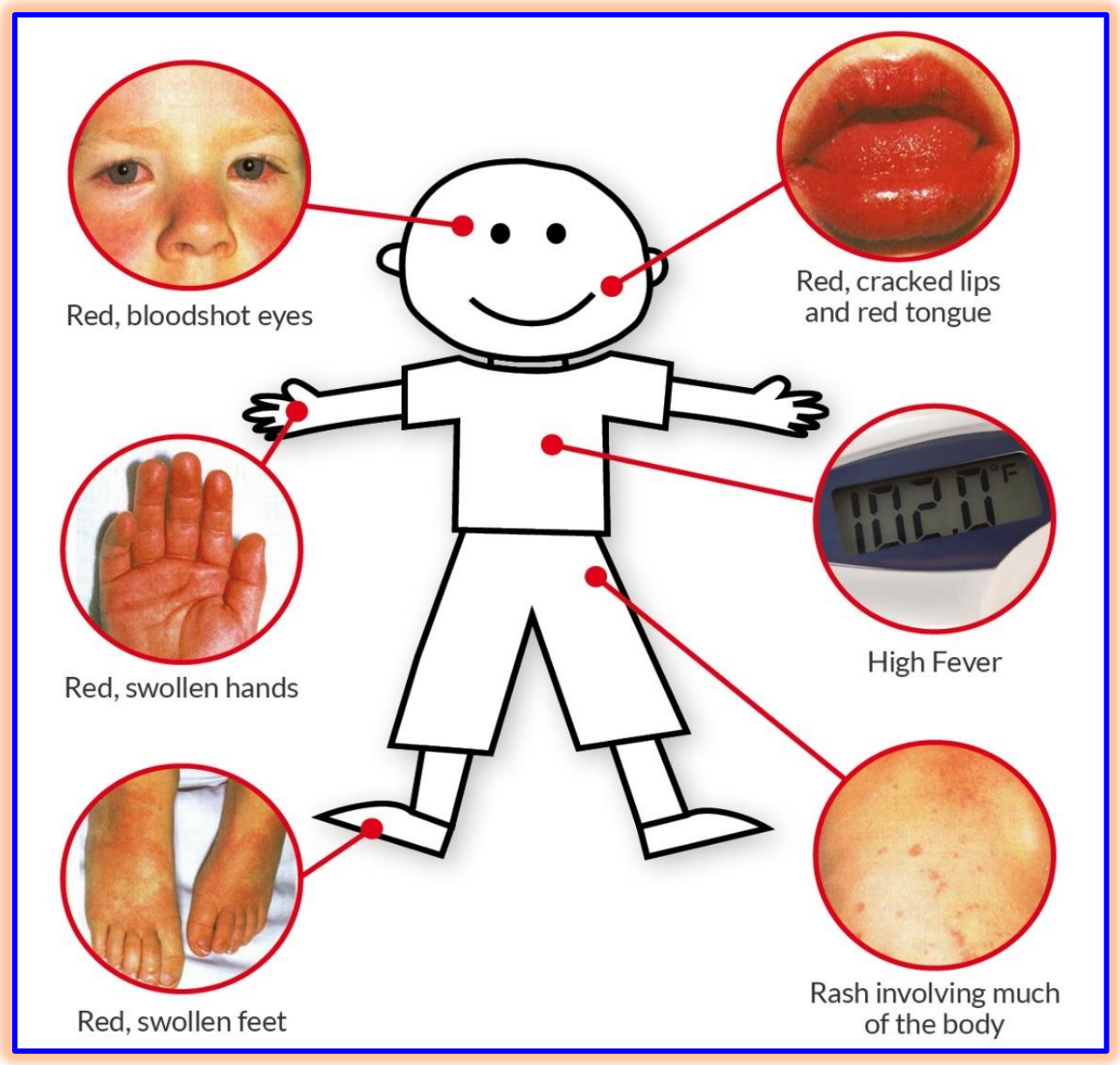
→ **Potent** steroids eg, (betamethasone valerate **0.1**%). (0.1% not 0.025%).

Note that clobetas**ol** (0.05%) can be used but it is very potent and it is more appropriate to seek dermatology advice before prescribing it.

Here is the order of the topical steroids arranged from the least potent to the most potent:

- Hydrocortisone Acetate (either 0.5%, 1% or 2.5%) (**Mild**) →
- Betamethasone 0.025% ▌Clobets**on**e (**Moderate**) →
- Betamethasone 0.1% ▌Hydrocortisone Butyrate ▌Mometasone (**Potent**) →
- Clobetas**ol** 0.05% (**Very Potent**). (Usually not prescribed unit referred to dermatology).

Kawasaki Disease → Febrile systemic **vasculitis** in children < 5 YO.



◙ No specific diagnostic Test

◙ Diagnosed clinically by:

√ **High-grade fever (≥39 C) which lasts for > 5 days**.

Fever is characteristically resistant to antipyretics

(+) at least 4 of the following:

√ Bilateral, non-exudative Conjunctival injection (conjunctivitis)

√ Bright red, cracked lips

√ Strawberry red tongue

√ Painless Cervical lymphadenopathy

√ Red swollen palms and feet and the skin start to peel later -desquamation-

√ Polymorphous Rash

Mnemonic → CRASH BURN.

Conjunctivitis – Rash – Adenopathy – Strawberry tongue – Hand foot erythema – Burning High Fever

◙ **Complications →** **Coronary Artery Aneurysm √**

◙ **Management → aimed at preventing aneurysm.**

♦ **High-dose aspirin**. (Low dose aspirin is given after settling of fever).

♦ **IV immunoglobulin**. (If given early → ↓ risk of coronary artery aneurysm).

♦ **Echocardiogram** (rather than angiography) is used as the initial screening test for coronary artery aneurysms.

• It is important, for your general medical knowledge, to know that the use of Aspirin should normally be avoided in children due to the risk of **Reye's syndrome** (***Encephalitis*** + ***Liver damage***).

• Kawasaki disease is one of the few indications for the use of aspirin in children (to prevent Coronary Artery Aneurysm).

◙ **Scenario:** A 4-year-old child (girl) presents with: 6 days of high fever, 2 days of hands and feet redness swelling, 2 days generalised rash. Her vaccinations are up to date. On examination: erythematous cracked lips, palpable cervical lymph nodes. What is the most likely **complication** associated with this condition?

→ **Coronary artery aneurysm**.

• This is a case of Kawasaki disease.

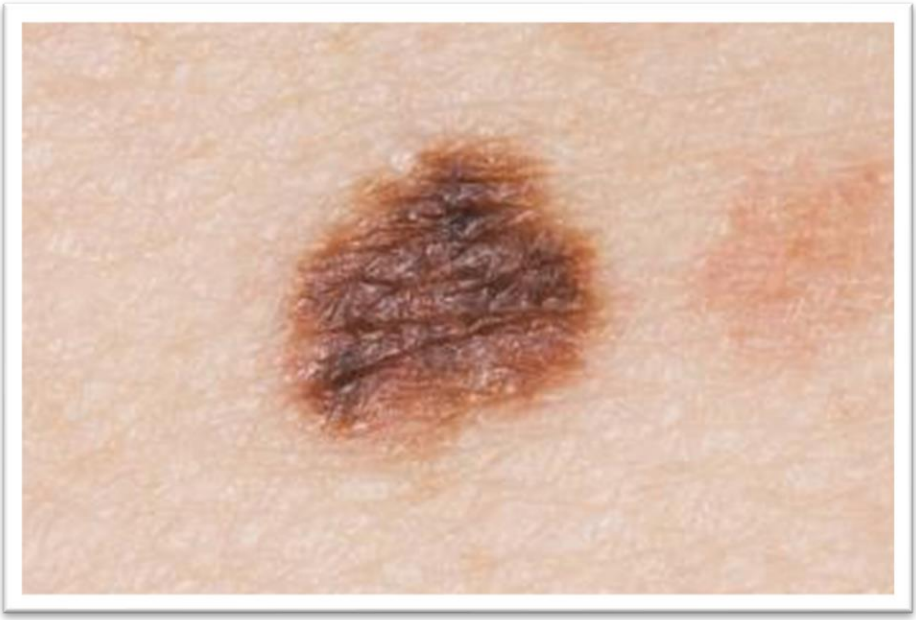
• No specific diagnostic test but we do (Echocardiogram) for the aneurysm.

• If asks about Rx → high dose aspirin + IV immunoglobulin.

A Quick Reminder:

If you as a GP suspects a malignant melanoma eg (a lesion that is asymmetric, with irregular borders, largest diameter is > 6 mm, varying shades of colour)

→ **Refer urgently to dermatology.**

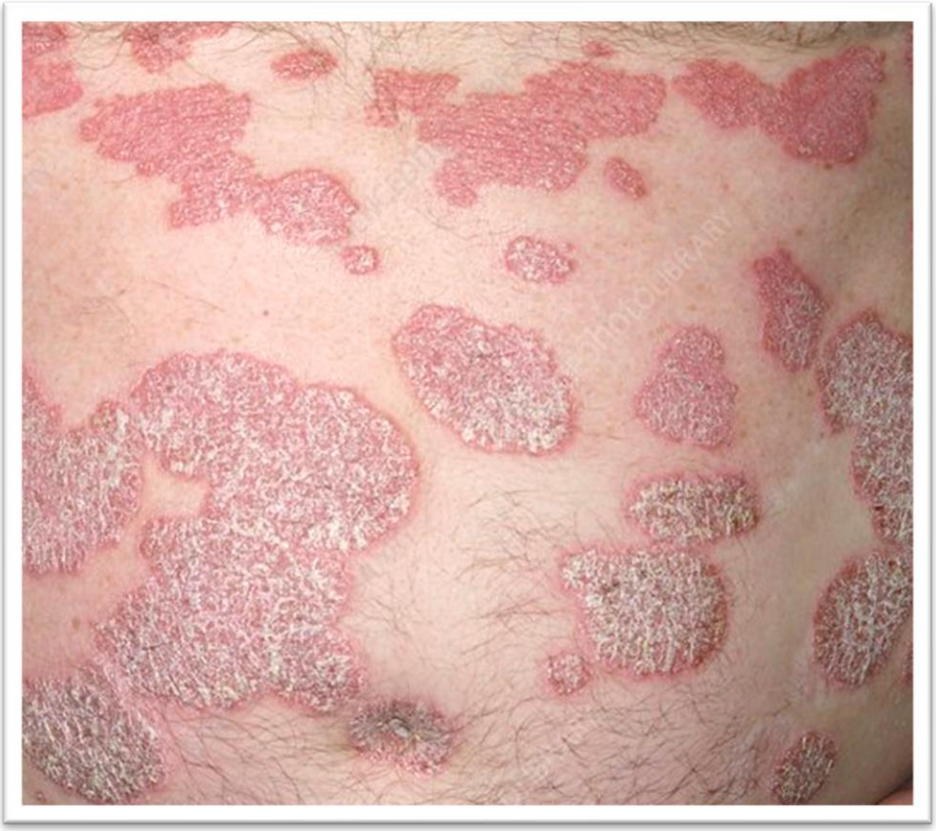


Important Questions on Psoriasis:

Q1) Which antihypertensive medication can worsen psoriasis?

→ ACE inhibitors (eg, ramipril).

Q2) Describe the lesions in the following image and what is the diagnosis?



- Well demarcated oval and elevated pinkish lesions with silvery scales.
- The most likely Dx → Plaque psoriasis.

Important Notes on Psoriasis:

- Itchy, scaly, well demarcated, circular or oval, reddish, elevated lesions (Plaques).
- Overlayed with white or silvery scales.

- It is a chronic **relapsing** (come and go) condition.
- It can develop on elbows, knees, Scalp…etc.

Ie, on the extensor surfaces + scalp + sometimes abdomen.

- ± Nail changes (pitting, onycholysis).
- **NOT** Contagious
- Strong **Genetic Basis** (Family Hx is often given as a hint).
- Vigorous Scraping → Pinpoint Bleeding → Auspitz' Sign.
- New lesions appear at sites of injury of the skin → Kobner's reaction.
- **ACE inhibitors** (eg, ramipril) can flare up and worsen psoriasis.

Rx:

- Topical Corticosteroids.

- Vitamin D analogues.

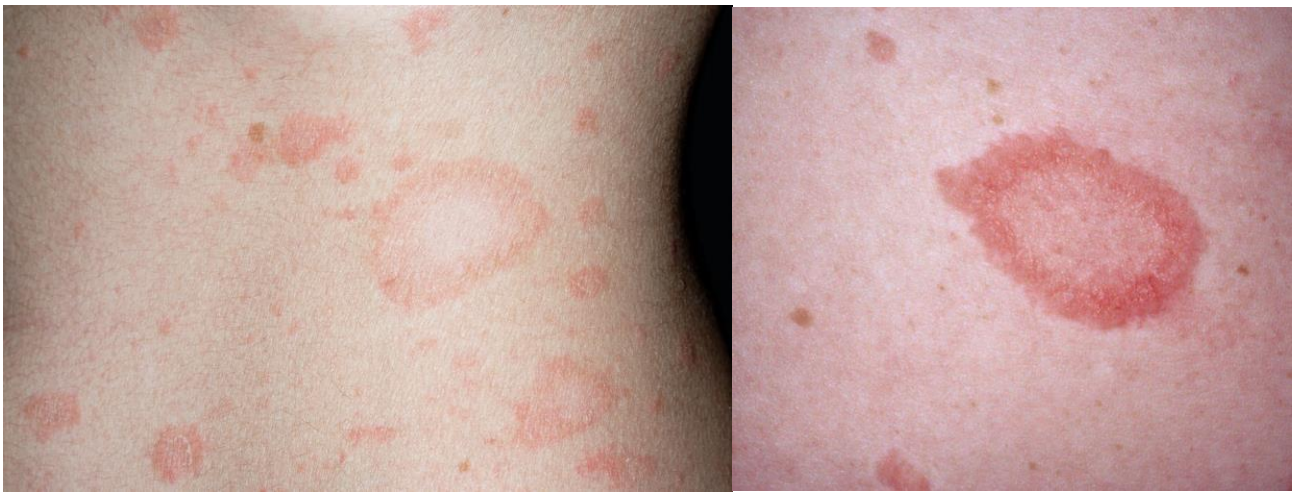
- Tar preparations.

◙ Management of molluscum contagiosum

→ Reassure.

◙ What is the diagnosis of this lesions?

(Disseminated erythematous maculopapular eruptions mainly on the back and trunk, with a larger circular lesion observed. They are symptomless; No itchiness, burning or soreness):



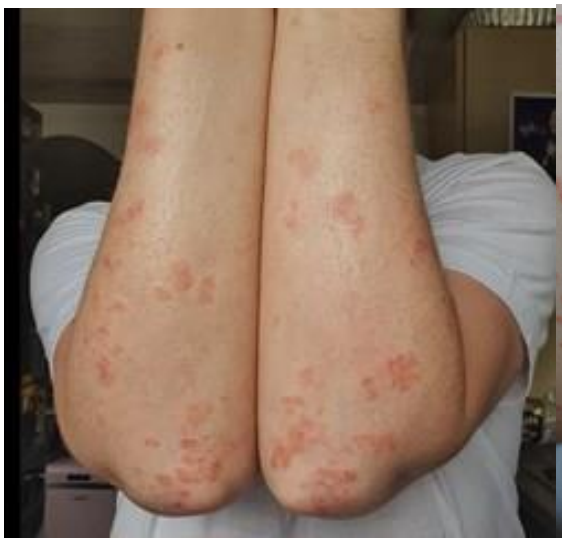
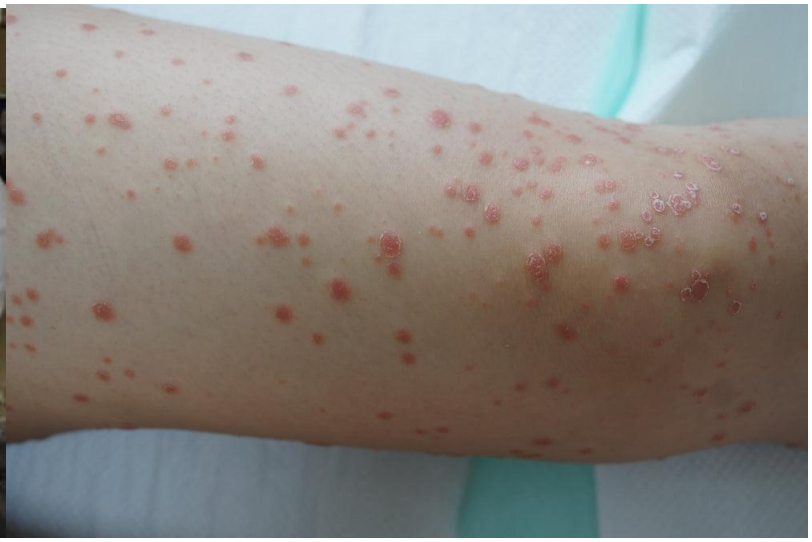
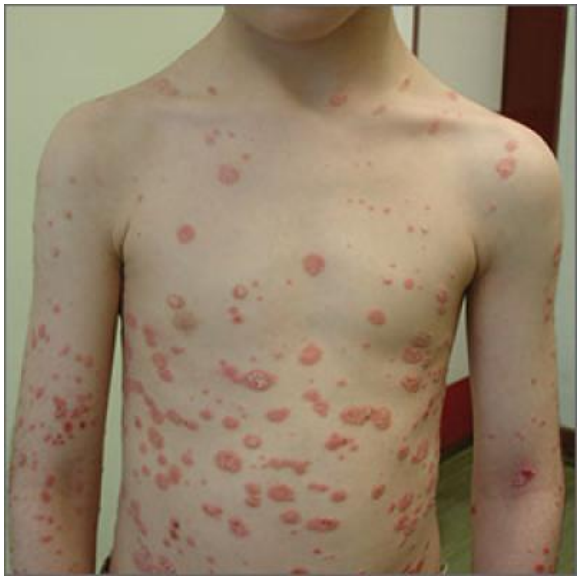
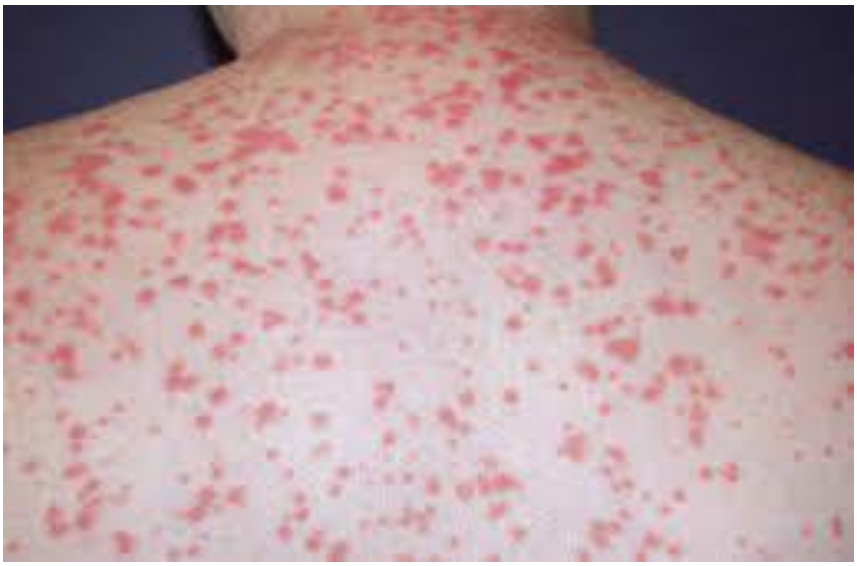
• This is most likely a case of → **Pityriasis Rosea**. (Not painful, Not itchy).

• (The biggest shown lesion is called Herald patch; a classic for Pityriasis rosea).

• It usually resolves spontaneously.

• Important Note: If there is no (No treatment) in the options, pick (topical steroids) as it is one of the treatment lines of psoriasis (Emollients, Topical steroids, Vitamin D analogues, tar preparations, if not responsive → Phototherapy).

Guttate Psoriasis

Guttate psoriasis: small drop-like eruptions.

It can appear suddenly after throat infection.

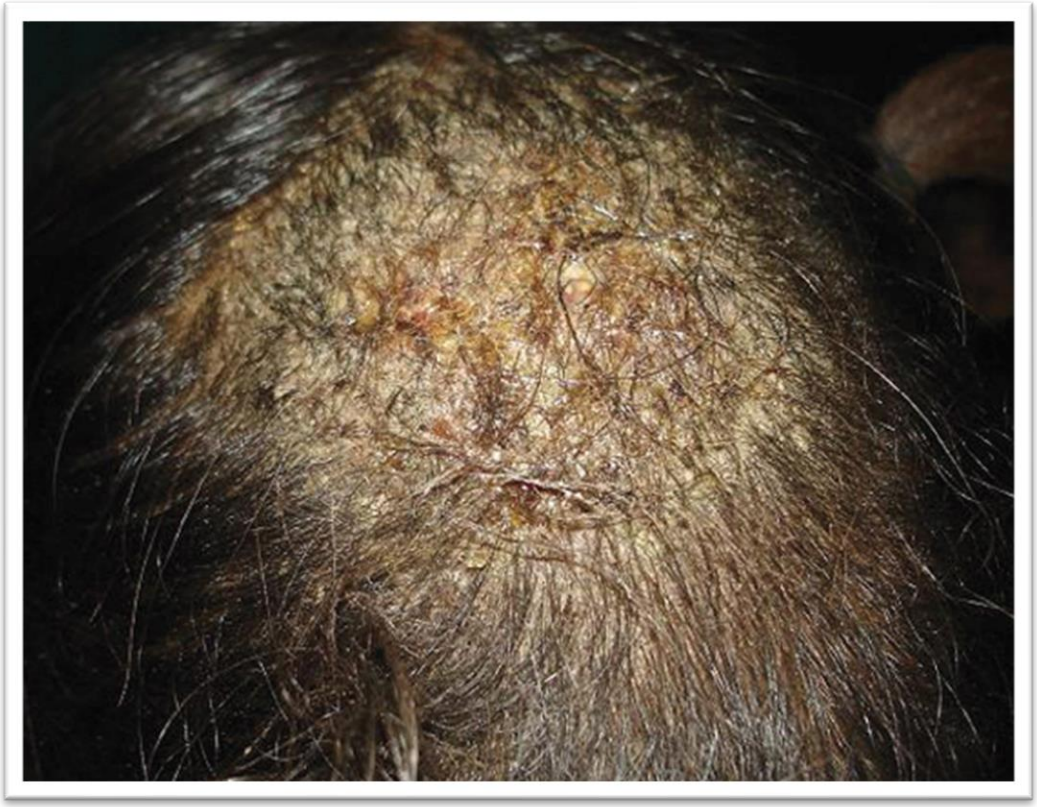
± Hx of psoriasis in the patient or his family.

Regarding hair loss:

• **Alopecia areata** → well-circumscribed, round or oval patches of hair loss, no inflammation, scaling or scarring + rapid onset.

• **Tinea capitis** → It is a fungal infection, presents with scaling, and might show signs of inflammation.

Alopecia areata



Tinea Capitis

Important causes of hair loss (not patches hir loss)

√ Hypothyroidism (check TSH, T4).

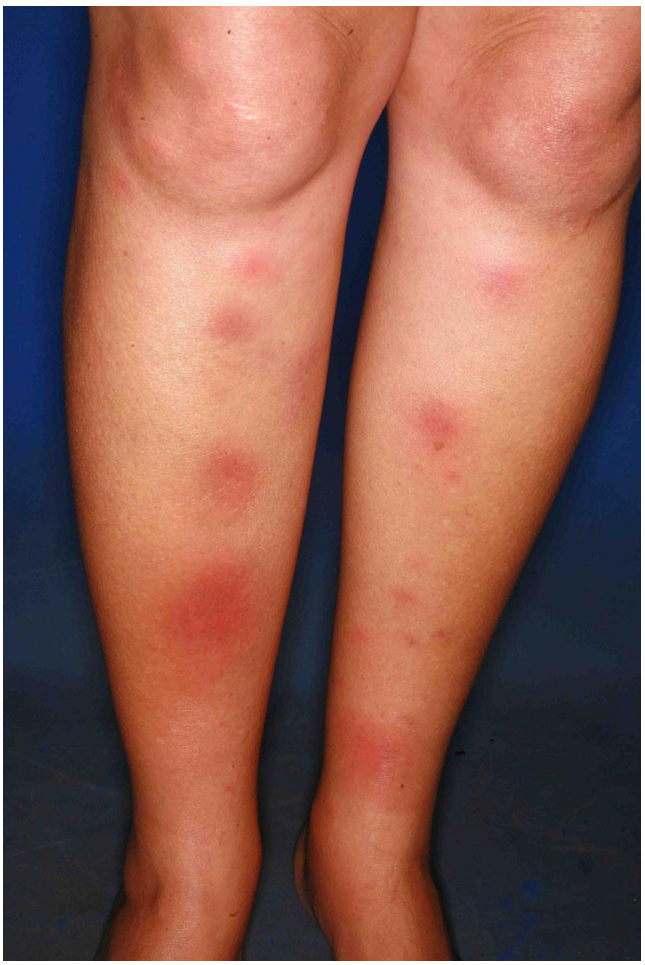
√ Iron deficiency (suspected especially if MCV is low, next → Check serum ferritin).

√ Vitamin D deficiency, Zinc deficiency.

Q) What is the most common dermatologic manifestation associated with sarcoidosis?

→ Erythema Nodosum.

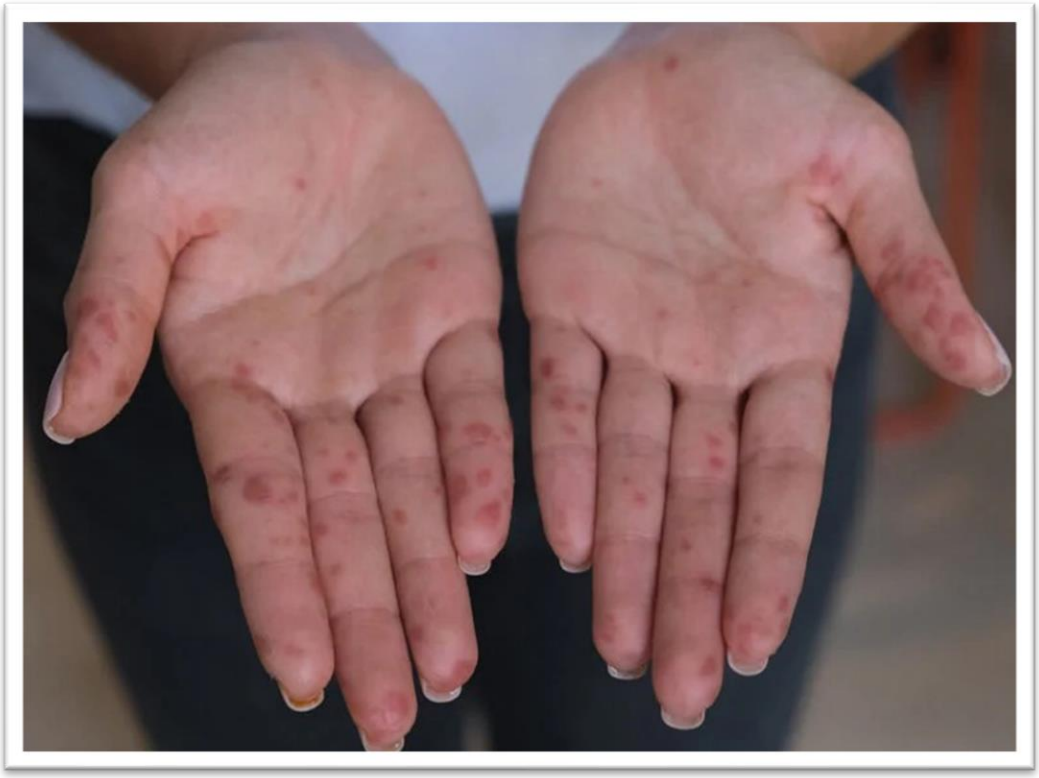
(**Sarcoidosis**: dry cough, shortness of breath, fatigue, chronic uveitis – eye redness, pain and photophobia-, chest x-ray shows bilateral symmetric hilar lymphadenopathy and diffuse reticulonodular infiltrates**)**.



Erythema nodosum: painful tender nodules over shins

Hx of: Inflammatory bowel disease (UC, CD), Penicillin, Sarcoidosis, TB.

A 36-year-old man presents with a 4-day history of fever, sore throat, feeling unwell. He has painful oral and genital ulcers and a non-itchy on his hands and feet. The rash consists of multiple small vesicles on erythematous bases. A picture is given:



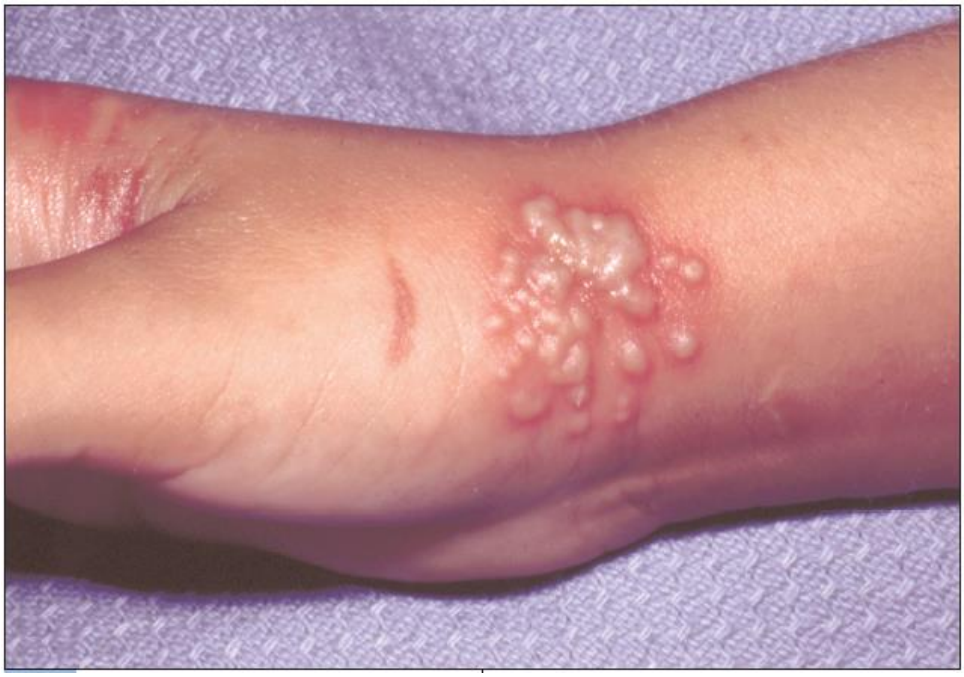
What is the most likely causative organism?

→ Hand, foot, and moth disease (HFMD) → Coxsackie virus.

• In HFMD, genitals can sometimes be affected.

• In herpes simplex virus (HSV), even though it can cause genital ulcers and skin lesions, the rash in the picture above is not typical for HSV. HSV rashes generally

present as grouped and densely clustered vesicles, not widespread. See the picture below:



Herpes simplex virus (HSV) in the hand: grouped and densely clustered.

Quick Important Reminders:

• If a mole is enlarging, and or changing in colour:

→ Refer “urgently” to dermatology. (Potential malignant melanoma).

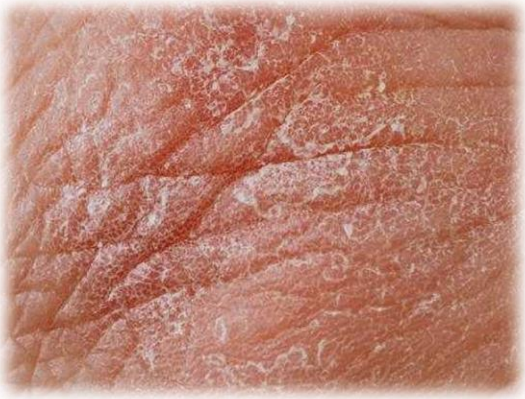
• Pruritic (ie, itchy) red scaly rash, on wrists, elbows, knees, exacerbates by physical activity (eg, playing rugby) and cold weather, common in adolescence

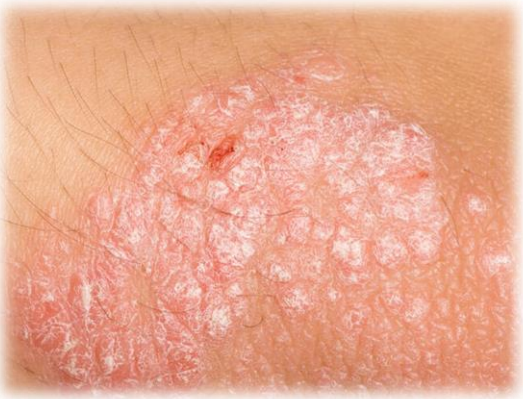
→ Atopic eczema.

• The antihistamine the has the least drowsiness effect:

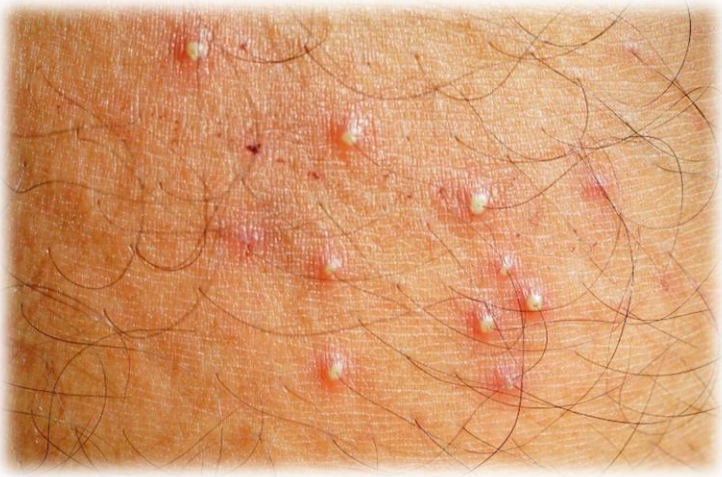
→ Cetirizine.

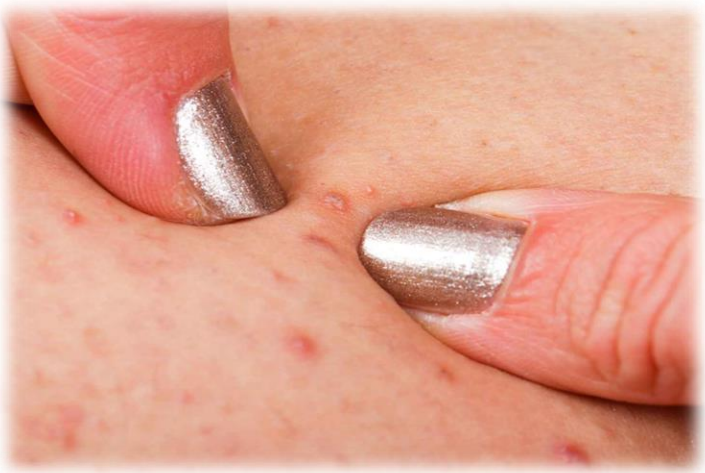
• Lichen Sclerosus: White patchy atrophic changes to the skin, particularly affecting the anogenital area. It is common in the vulva of the postmenopausal women, causing significant discomfort, itchiness (pruritus), and burning sensation.





Folliculitis





◙ **Folliculitis** is a skin condition involving the inflammation of hair follicles, often due to bacterial infection, with *Staphylococcus aureus* being the most common cause. It appears as small, red, inflamed bumps or pustules around hair follicles, which may be itchy or painful. These lesions can rupture, releasing pus or blood.

◙ **Diagnosis** is typically clinical, based on visual inspection. In recurrent or resistant cases, swabs for culture and sensitivity may be required to identify the infecting organism.

◙ **Management**:

- **Mild cases**: Treated with antiseptic washes.
- **Severe cases**: Oral antibiotics are necessary.
  - First-line: Flucloxacillin (use clarithromycin if allergic to penicillin). **Imp √**
  - If linked to hot tub use, consider *Pseudomonas aeruginosa* and treat with ciprofloxacin.

Challenging Scenario

A 50-year-old woman visits her GP with a five-day history of sharp pain on the right side of her chest. The pain radiates around her chest, primarily between the 5th and 6th ribs. She describes the pain as intense, and it worsens with movement. There are no accompanying symptoms of cough or shortness of breath. She has a history of type 2 diabetes mellitus but denies any recent trauma. On physical examination, there is tenderness along the ribs but no visible skin changes or rashes. Auscultation reveals a mild wheeze on both sides. What is the most likely diagnosis?

Options:

A) Lung carcinoma.

B) Musculoskeletal pain.

C) Fracture of rib.

D) Herpes zoster.

E) Fracture of thoracic vertebrae.

Answer and Explanation:

The correct answer is → **D) Herpes zoster**.

Explanation:

• In this case, the sharp, radiating pain along a specific area of the chest (between the 5th and 6th ribs) suggests a dermatomal distribution, which is characteristic of **Herpes Zoster** (**shingles**).

• The lack of a rash does not rule out shingles, as early stages of shingles can present with pain before any skin changes become visible, a condition known as **zoster sine herpete**.

• Her history of type 2 diabetes mellitus is an important risk factor, as it can predispose individuals to viral reactivation, increasing the likelihood of shingles.

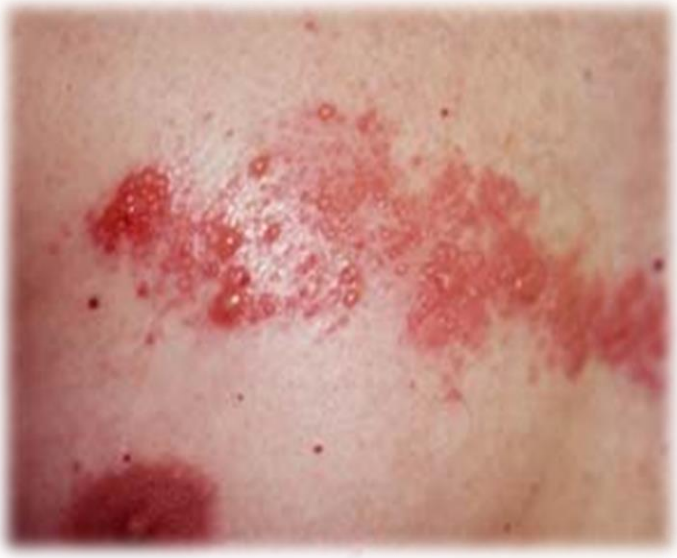
• Although there is no rash at this stage, the intense, sharp, localized pain with a dermatomal pattern strongly points toward shingles.

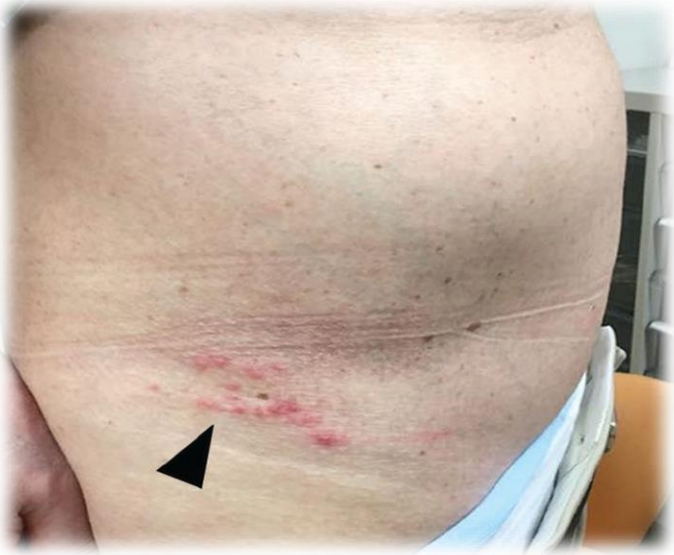
• Additionally, the mild wheeze noted on auscultation may be a distractor related to an underlying condition (eg, COPD), but it does not seem directly related to the chest pain.

• Other options like musculoskeletal pain or a fracture would likely involve a history of trauma or a more generalized tenderness without the sharp, localized, radiating pain seen here.

• Thus, the most likely diagnosis is **Herpes zoster**.

Herpes Zoster (Shingles)





Herpes zoster, commonly known as shingles, is a viral infection caused by the reactivation of the varicella-zoster virus, which also causes chickenpox. It typically affects older adults or those with weakened immune systems.

◙ **Clinical Presentation**:

- Pain, burning, or tingling sensation on one side of the body before a rash appears.
- The rash consists of red patches that turn into fluid-filled blisters, usually confined to one side of the body (dermatomal distribution – limited to a single dermatome) and not crossing the midline.
- Associated symptoms may include fever, headache, and general malaise.

◙ Management:

- **Oral antiviral treatment**: eg, Oral acyclovir, valacyclovir, or famciclovir should be started within 72 hours of rash onset, especially in individuals with moderate to severe pain or rash.
- **Intravenous (IV) acyclovir**: Reserved for more severe cases, such as disseminated shingles, shingles affecting the eye (ophthalmic zoster), or in severely immunocompromised patients (e.g., HIV patients with low CD4 counts, or those on immunosuppressive therapy).
- **Neuropathic pain management**: Amitriptyline or other agents can be used for post-herpetic neuralgia (a complication of shingles).

◙ Very Important (For Shingles – Herpes Zoster):

√ If the herpes rash resolves but sharp, throbbing pain persists, this indicates a case of post-herpetic neuralgia. In this case, a drug for neuropathic pain should be given, such as → **Amitriptyline** (first choice), **Gabapentin**, **Duloxetine**, or **Pregabalin**.

√ In the acute phase of shingles, especially within the first 72 hours of rash onset and in cases of moderate to severe rash or pain → **oral aciclovir** is recommended.

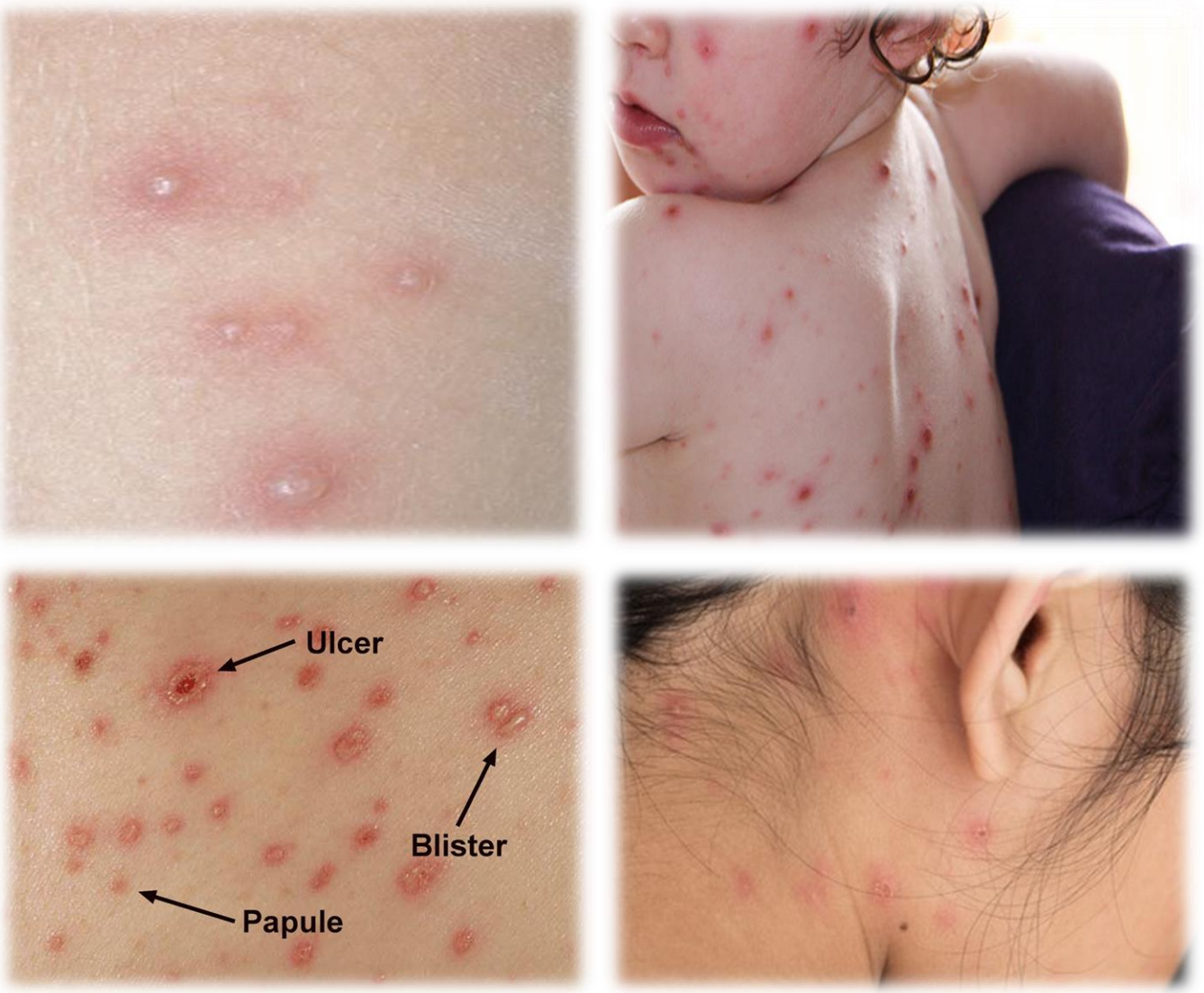
◙ **Important Notes**:

- Immediate hospital referral is needed for shingles in the ophthalmic branch of the trigeminal nerve (Hutchinson's sign or visual symptoms) to prevent complications.
- Immunocompromised patients or those with widespread involvement may require IV acyclovir and hospital admission.

◙ **Prevention**:

- Vaccination for older adults can reduce the risk of shingles and its complications.

Chickenpox



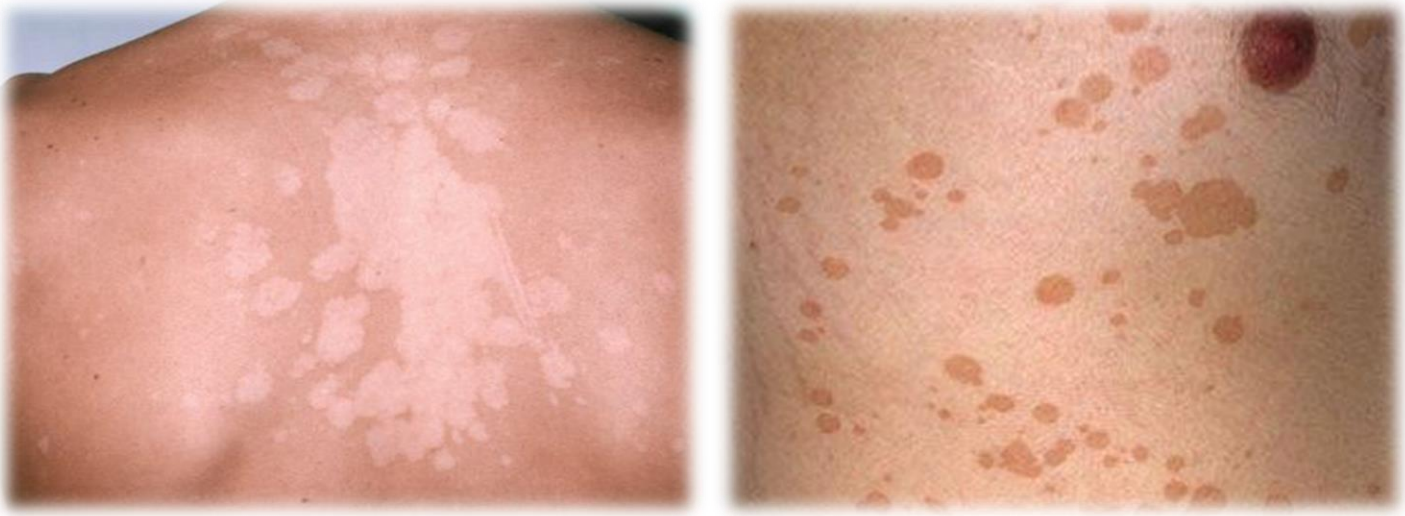
- **Definition**: Chickenpox is a highly contagious viral infection caused by the varicella-zoster virus, characterized by an itchy rash and fever. It usually affects children and is mild in healthy individuals but can cause complications in high-risk groups.
- **Cause**: Infection with varicella-zoster virus, spread through respiratory droplets.
- It is typically, mild and self-limiting, but more severe in immunocompromised patients.

- **Infectivity**: **2 days** before the rash appears until 5 days after. Incubation period: 10-21 days.
- **Clinical Features**:
  - Fever is often the first symptom.
  - Itchy rash, starting on the head, chest, and back, then spreading.
  - Rash progression: macular → papular → vesicular → crusted.
- **Management**:
  - **Pruritus (itching)**: Treated with antihistamines and emollients. Calamine lotion can be used but must be reapplied when dry.
  - **Varicella-zoster immunoglobulin (VZIG)**: Given to newborns with exposure at birth.
  - **Aciclovir**: Administered to pregnant women, immunocompromised individuals, or those with severe disease, either for prophylaxis or treatment.
  - **Healthy children**: Antivirals are not typically required unless complications arise. Reassure parents that chickenpox is self-limiting and suggest measures to prevent scratching (e.g., trimming nails, antihistamines) to reduce secondary infections.
- **Key Summary**:

✓ High-risk groups (pregnant, immunocompromised) with exposure + no varicella antibodies **or** already developed chickenpox → **Aciclovir**.

- ✓ Healthy children with mild symptoms → **Reassurance**. They usually recover without antiviral treatment.
- ✓ Neonates with exposure → **Varicella-zoster immunoglobulin** (**VZIG)**.

Pityriasis Versicolor



◙ **Definition**: Pityriasis versicolor is a superficial fungal infection caused by the yeast ***Malassezia***, which thrives in areas of skin that produce a lot of sebum, particularly the chest and back.

◙ **Presentation**:

- Appears as well-defined, fine, scaly patches on the skin.

- The affected areas may show either hyperpigmentation (darker) or hypopigmentation (lighter).
- The condition is generally asymptomatic but can occasionally cause mild itching.

◙ Management of Pityriasis Versicolor:

- **First-line**: Topical antifungals like ketoconazole shampoo or selenium sulfide.
- **Recurrent or extensive cases**: Oral antifungals such as itraconazole or fluconazole.
- **Prevention**: Regular use of antifungal shampoos to prevent recurrence.

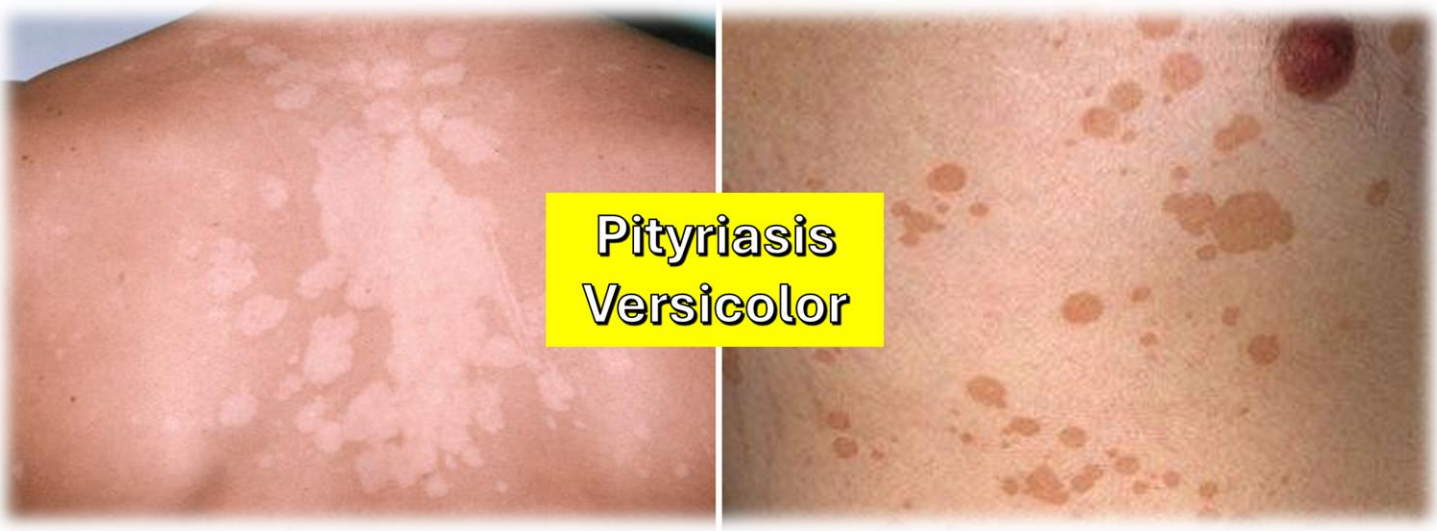
◙ Why Treat?

Though not harmful, treatment is recommended to clear infection, improve appearance, and prevent recurrence. It may resolve on its own, but treatment speeds up recovery and reduces flare-ups.

Difference between Pityriasis Versicolor and Vitiligo:

- **Cause**:
  - *Pityriasis Versicolor*: A superficial fungal infection caused by *Malassezia* yeast.
  - *Vitiligo*: An autoimmune condition where melanocytes (pigment-producing cells) are destroyed, leading to loss of skin color.
- **Appearance**:
  - *Pityriasis Versicolor*: Presents as small, scaly patches that may be lighter or darker than the surrounding skin. Often affects the chest and back.
  - *Vitiligo*: Characterized by smooth, depigmented (completely white) patches of skin with sharp borders. Commonly affects the face, hands, and areas around body openings.
- **Symptoms**:
  - *Pityriasis Versicolor*: Mild itching may occur, but it is mostly asymptomatic.
  - *Vitiligo*: Usually asymptomatic with no itching or discomfort.
- **Treatment**:
  - *Pityriasis Versicolor*: Treated with antifungal medications (topical or oral).
  - *Vitiligo*: No cure, but treatments may include topical steroids, light therapy, or other immune-modulating therapies.
- **Prognosis**:
  - *Pityriasis Versicolor*: Often recurs, but treatment is effective in clearing the infection.
  - *Vitiligo*: Progressive and may spread over time, though treatment can help restore some pigment.

- **Images**:



◙ Remember that: Psoriasis is exacerbated by:

√ ACE inhibitors.

√ Lithium (used in bipolar disorder management).